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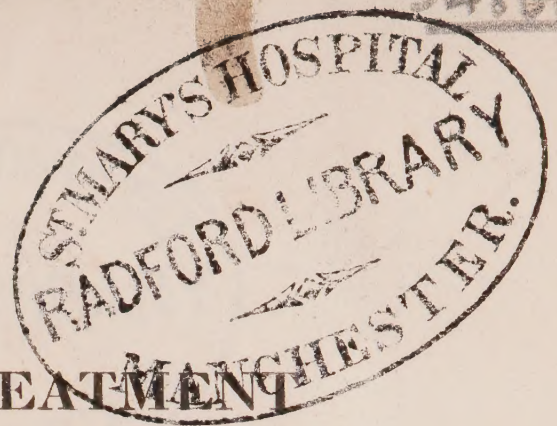
NATURE AND THE NERVOUS

~~OF THE~~

DISEASES OF CHILDREN.

MILLS MARLEY, F.R.S.

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ON THE

NATURE AND TREATMENT

OF THE MOST FREQUENT

DISEASES OF CHILDREN,

WITH

OBSERVATIONS ON THE MANAGEMENT OF EARLY INFANCY,

PRACTICAL REMARKS ON THE EXHIBITION OF OPIUM,

AND ON GENERAL AND LOCAL BLEEDING.

BY

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PREFACE.

IN undertaking the present work, I am strongly impressed with the importance attached to it; it is, therefore, with feelings of diffidence that I submit it to the profession, as I am aware that there are others equally, and indeed better qualified for the task. But as all arts and sciences owe their progress, and whatever degree of perfection and utility they may possess, to the united labours of many, I trust it will not be considered unimportant or unnecessary to give the result of an experience derived from the surest source of information — the bed-side of the patient. I have chiefly restricted my observations to the diseases of early childhood, a period at which the human body is most susceptible of derangement, and possesses the greatest degree of irritability, alarming and dangerous symptoms some-

times arising from apparently slight and trivial causes. It is, I believe, generally acknowledged, that this subject has been much neglected; though, in my opinion, there is none requiring a deeper or more minute investigation.

It is to be regretted that many consider the management of the diseases of children more difficult than those of adults; but a little experience will teach the observant practitioner, that though words are denied their little patients, they have a language which may always be interpreted, and with which nature has gifted them to express their various wants: such are the countenance, the expression of the eye, the numerous gestures and cries indicative of pain and uneasiness. Besides these, there are other criteria which equally indicate a healthy or disordered state, such as the appearance of the tongue and skin, the secretions, excretions, &c. If the necessary inquiries be made, and if proper attention be paid to the accompanying symptoms, we shall seldom fail in discovering the seat or cause of the indisposition we are called upon to remedy.

I have found it extremely difficult, and indeed impossible to form a scientific classification; and to those conversant with the diseases of children, the impracticability of arranging them satisfactorily must be obvious. The symptoms of the diseases are described as they generally occur. The treatment is next considered, and in those cases, in which post mortem examinations might prove interesting, they are given. Considering the management of early infancy as intimately connected with my subject, I trust the few general observations I have made will not be deemed irrelevant. Some remarks on the use of opium follow, while a subject of great practical importance, namely, bleeding, has not been overlooked or neglected.

In the selection of remedies, I have endeavoured to simplify them as much as possible, considering the success of our practice to depend more upon the proper choice of the remedial agents employed, than upon a multiplicity of them. I have, in a few cases only, specified the doses, as the age of the child, the description of constitution, and the nature and

extent of the disease, must be our guide on that point. I have scrupulously avoided entering into any hypothetical discussion throughout, while I have equally refrained from all imaginary distinctions, which would only tend to involve the subject in obscurity. For whatever errors of style and composition may be observed in the following pages, I must plead the many interruptions of professional avocations.

11, Cork Street, Burlington Gardens,

March, 1830.

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OBSERVATIONS

ON THE

MANAGEMENT OF EARLY INFANCY.

MANY are the dangers to which an infant is exposed on its entrance into the world. It has to struggle, not only with the weakness incidental to its age, and the almost imperfect state of its organs, for the full development of which, nature has assigned a longer period than to any other living creature; but it has other adventitious trials to surmount. During the first few weeks from its birth, when it requires all that care and attention can bestow on its helpless state, when the slightest deviation from the course pointed out by nature may entail mischief not easily remedied, when all its functional powers are most easily deranged,—it has, in many cases, to submit to the prejudices and arbitrary opinions of a nurse, who, taking

advantage of the enfeebled state of the mother, and assuming on the responsibility of her situation, ventures to act, in her treatment of the infant, according to her peculiar ideas, which are frequently founded on ignorance and superstition, without attending to, and very often in direct contradiction to the directions of the medical attendant. To obviate the evils this mode of treatment frequently produces, I intend, before entering upon the diseases of children, to arrange, as concisely as possible, some opinions which appear to me best calculated for promoting the health of infants, from the period of birth till they have passed the first perilous years of infancy.

It is of the greatest consequence to select, as a nurse, a woman of experience, and one who will obey the directions given to her; for I have repeatedly seen infants, who were apparently born healthy, suffer most materially from the mismanagement of those to whose care they were at first entrusted.

Different opinions have been given as to the temperature of the water in which an infant should be washed. To the use of cold water in this case I am most decidedly adverse. Reason and experience teach us, that to plunge a newly-born infant into an

element so diametrically opposite to that in which its previous existence has been passed, is to expose it to dangers it might easily avoid. It is likewise contrary to the general rules of nature; for as time is required to perfect all things submitted to her laws—as the uses of the senses and limbs are all gradually developed—so must it be with the means employed to render an infant hardy. Let him be first accustomed to breathe the surrounding air, let his little body be so far inured to its new life, as to have acquired some innate heat, then will it be time to use cold water in washing. If, on the other hand, the water should be too warm, its delicate skin may become irritated, and bad effects might be again produced. Therefore the first ablution should be in water agreeably warm; and when the infant is thoroughly cleansed, it should be well rubbed before the fire, to increase the circulation, taking the greatest care to avoid exposure to cold, which might produce coryza, inflammation of the eyes, &c. If the child be healthy and the weather mild, after the first fortnight the warmth of the water may be gradually lessened, till at last cold water may be employed.

As the eyes of a new-born infant are very weak,

it is necessary to pay attention not to expose them to a strong light, as it may tend to weaken and injure the sight, and in some cases might produce strabismus, and I have known it to produce convulsions.

The first want an infant experiences is food. It is a common practice, as soon as the washing and dressing are accomplished, to silence its cries by administering gruel, and that frequently in a much larger quantity than its delicate stomach can possibly digest; consequently, the child, from a sensation of fulness and uneasiness, is unable to recover the fatigues it has undergone by a quiet sleep, and probably it may be again tormented with a repetition of the unnecessary food. I use the word unnecessary, because, in its newly-acquired life, it requires a certain time to arrange its various organs. In this too we may be guided by nature; for the proper secretion of milk seldom takes place for some time subsequent to the birth of the child. Would not this seem to indicate that immediate nourishment is not requisite? For as none of the senses seem fully developed, or capable of undergoing any exertion, neither do I consider the digestive organs sufficiently settled to undertake so soon their respec-

tive labours. I should therefore recommend, that instead of feeding the child after it is dressed, it should be placed in its cot, warmly wrapped in flannel, and there is little fear but that it will soon recruit its strength by sleep.

There are various opinions as to the time which ought to elapse before an infant be placed at the breast. Some authors recommend its being postponed four-and-twenty hours, and sometimes longer; but I am at a loss to ascertain upon what principle. I consider the most eligible plan to be to let the child suck in the course of three or four hours, as the little irritation it produces on the breast stimulates the gland, and hastens the secretion of milk; and very generally he can obtain at least a small quantity. If so, it will not only sooth and quiet him, but from the peculiar properties of this first milk, which is called colostrum, he derives other advantages; for this secretion is intended to clear the intestinal canal of the meconium accumulated in it. Besides the purgative property it possesses, its fluidity renders it the most proper food for the stomach to digest. As long as the child seems satisfied, and sleeps after he has been at the breast, it is unnecessary to have recourse to any artificial

feeding; but if this secretion be so long in forming as to render it requisite to give some other nourishment, it is advisable that it be a substance as nearly as possible similar in consistence to that pointed out as the natural food. We must bear in mind that the digestive organs are as yet so weak as to be unable to bear any solid food; they are, as it were, learning to acquire their powers, it is therefore highly improper to begin by giving any thing containing solids in any form. Where I find it indispensable to feed an infant, I generally recommend a little new milk, which should be warmed, and added to about a third of water, in which a few caraway seeds have been boiled: it should be given in small quantities. But even this should be discontinued, when the mother has a sufficient secretion of milk to satisfy the infant.

It is not uncommon for the child to be accustomed to lie all night at the breast; but this I consider a very pernicious habit. He sucks so much as to overcharge his stomach, which must either reject the milk, or he suffers from indigestion; he is unable to breathe a pure air, and from being overloaded with clothes, he is prevented sleeping as soundly as he would do in his cot. Besides its

impropriety, as far as regards the child, it has its inconveniences for the mother. By accustoming him to be placed in his own little bed, as soon as he has taken what is sufficient, he soon becomes habituated to return to it, by which means he generally sleeps longer, and the mother is enabled to recruit her strength by some hours' rest.

It is wonderful to observe the link or connection, as it were, that continues to subsist between mother and child; for as in the first instance the milk is thin, so does it increase in quantity and consistence as the child advances in age and gains strength. It is obvious that this is all the nourishment requisite; and where there is no obstacle to oppose it, no other should be given for five or six months. At that period, should he be healthy, I should recommend his having a meal once in the day, to prepare his stomach for the change of diet which must ultimately take place at the time of weaning. A milk diet should be the first given. For this purpose a little arrow root is both simple and easy of digestion. Should this be found to agree with the stomach, it should be persevered in for a short time; then, as the digestive powers increase, it may be replaced with a French roll boiled thoroughly in water till it

is reduced to a pulpy consistence: it should be worked through a fine sieve, and to it should be added a little warm milk, sweetened with sugar. As flatulence is often produced by change of diet, it will be advisable to boil with the food a few caraway seeds in a bag, which may tend to obviate it. Whatever the food may be, it should be always given through a bottle; for as the child is then obliged to take it by suction, he will not swallow more than sufficient; and what is of great consequence, the salivary glands will become stimulated, and the saliva will pass into the stomach with the food, which will materially assist the digestion. When he has about four teeth, if there be nothing to prevent it, he may be entirely weaned. After the eighth or tenth month, if the child be healthy, it will be advisable to take him entirely from the breast; his stomach will by that time have acquired sufficient strength to digest more solid substances. If he be forward in cutting his teeth, he may have, once a day, a little chicken or mutton broth, or beef tea, which is preferable to either, alternately with a light rice or sago pudding. But should dentition prove laborious and tedious, the breast-milk should be by all means continued for a

twelvemonth; though if his stomach be not very weak, I should still recommend a little intermediate feeding on milk diet.

So far I have considered the mother as the nurse of her infant, and it would be well if this were always to be the case; but it is far otherwise. Were I to say that women possessed one virtue in preference to any other, I should say that that one was the warmth of their affections and the kindness of their hearts. From childhood it seems congenial to them: it “grows with their growth;” and unless warped by coldness or misfortunes, it will generally be the leading principle through life. To their fostering care has nature entrusted the earliest years of our childhood; and when we have passed that age, and become actors and sufferers in the world, to whom do we turn for sympathy, consolation, and often advice, but to the warm heart of woman. What sacrifices will not a woman make to benefit her family! What privations will she not undergo, what difficulties will she not surmount, and with what fortitude will she not frequently bear the most disastrous reverses! How true is the poet’s remark—

“ O, Woman ! in our hours of ease,
Uncertain, coy, and hard to please,
And variable as the shade
By the light quivering aspen made,—
When pain and anguish wring the brow,
A ministering angel thou ! ”

W. SCOTT.

But unfortunately this innate sensibility is too frequently stifled by the great arbiter, Fashion. Would that I could impress on the minds of its votaries the far greater pleasures they renounce, when they give up all the domestic ties which are so congenial to their nature, to follow in the giddy round of fashion. When does a female look more lovely than while fulfilling all the duties of maternal love? How soon would she be repaid by the smiles of her infant, for the applause and admiration to which she had been accustomed in the ball room. She would exchange the heartless flattery and unmeaning compliments of the world, for the increased affection and more sincere respect of her husband; and, what would be beyond all price, she would have the still, small voice of an approving conscience. How many are there that would willingly yield to the dictates of nature, who are withheld from it by the fear of ridicule;

and though formed for the enjoyment of every domestic virtue, carry an aching heart into company, because they have not courage to break through the trammels that surround them. Yet such is the force of custom, that the charge of their offspring is committed solely to the care of a hireling, who will in most cases sacrifice the child's interest to her own. If it be true, that moral and physical education begin from the period of birth, how culpable must that parent be, who can willingly resign her child to receive his first impressions from the nurses and attendants of his infancy. Discarded from the presence of her, who ought to instil the first rudiments of virtue, the young heart is soon thrown back upon itself; and as every thing is at first acquired from imitation, habits and impressions are formed, which years may not efface. This may be considered an exaggerated picture; but though I believe that it was more applicable to a former period, still I am persuaded there are too many who will acknowledge the justness of these remarks.

In some women, however, the constitution is so delicate, that the task of nursing must through necessity be delegated to another; in others the breasts do not secrete a sufficient quantity of milk,

or some other physical obstacle may be opposed to its practicability. Where a wet nurse is to be engaged, great care is requisite in the choice. The time of her confinement ought to correspond as nearly as possible with the age of the infant for whom she is to be engaged. I consider that a woman from four or five and twenty to about two or three and thirty is the best calculated to undertake this office; but there are many concomitants an affectionate mother will require in a nurse, besides the having a plentiful supply of milk. It is indispensable that she should be of a sound constitution: she must be of regular and sober habits. It is likewise necessary that she be a light sleeper, that she may not consider it a trouble to attend to the infant during the night; and the strictest orders should be given not to take him into bed with her. If it be necessary to give the breast she should sit up, and when the child is again asleep, replace him in the crib. I lay great stress on this last injunction: and to illustrate the impropriety of this pernicious custom, which, to say the least of it, is an unhealthy one, I may mention a melancholy fact which occurred not very long since. A woman who was in the habit of sleeping with one of the

younger children in the family, where she lived as nurse, had the misfortune to cause his death by overlaying him ; she was however retained in her situation. In the course of a few months, a second child who slept with her, suffered the same fate. In another case which fell under my observation, the child had his arm broken. I might cite many other cases, were it necessary, to prove the danger of this habit. I consider it of consequence that the manners and disposition of a nurse be mild and unassuming, for it is my firm opinion, that the tempers of many children have been ruined from the irritating and capricious treatment they have received in the nursery.

With regard to the regimen a wet nurse should observe. I have known a plentiful secretion of milk diminish in quantity from the over-anxiety of the mother, who thinking it necessary her nurse should live well, allowed her to eat a greater proportion of animal food than her stomach could digest. Others, who are fond of indulging an excessive and gross appetite, take advantage of their situation to satisfy their propensity to eating, under the plea of having two to support ; others will object to certain meats, as being injurious to their little charge. In fact, it is well known, that

upon taking the situation of wet nurses, those women, who a short time previous would have been thankful for a plentiful meal, however homely, are suddenly transformed into fastidious and dainty beings, considering their wants and wishes as of the greatest importance. I have always observed, that if a woman who is nursing eat heartily but not immoderately of plain food, avoiding that which is stimulating, she will, generally speaking, preserve her health, the result of which will be a plentiful secretion of milk. I consider meat once a day quite sufficient.

Nurses are strongly impressed with the idea that a great quantity of ale or porter is absolutely necessary to keep up their strength; but this is a very erroneous notion, and when carried to excess, will rather tend to diminish the secretion, particularly if taken at bed time. I should say, that a pint or a pint and a half of malt liquor in the course of the day is sufficient; still I think it advantageous to take a greater proportion of fluid than usual, but I should recommend tea, milk-gruel, (which is preferable at night to malt liquor) or broth. Regular exercise is indispensable, as whatever tends to keep up healthy action must assist in preserving an abundant supply of milk. I consider cleanliness,

both as regards the nurse and her young charge, of the greatest consequence in the management of an infant; it ranks next to food and sleep. The nurse should wash the child night and morning; the friction employed tends to promote the circulation and produce a glow over the whole body. But I should always recommend a mother not to trust implicitly in her nurse, nor to consider that because she is obliged to delegate to another the task of giving nourishment to her infant, she is thereby exonerated from the necessity of attending personally to its various wants. Many little illnesses may be obviated by the watchful eye of a mother, particularly the susceptibility infants have to take cold from exposure to draughts, carelessness in dressing, &c. It is generally supposed that a child will fret after his nurse, if she leave him on his being weaned, but I do not think his affections will be bestowed on her alone, if he have received the proper care and attention from his mother which his age exacted.

I believe I have stated the principal requisites in a wet nurse. I shall now proceed to the other substitute for the breast milk: I allude to artificial feeding. There are many parents who have an

insuperable objection to wet nurses, and where they are incapacitated from fulfilling this first of maternal duties, are most anxious to try the experiment of artificial feeding. If then the anxiety be great when a child is brought up according to the dictates of nature, how much greater must be the responsibility attending its health when it is to be reared by hand. The greatest care and the most unremitting attention are necessary, and every mother ought to be seriously impressed with the necessity there is of attending personally, not only to the administration, but, as far as possible, to the preparation of the food. Where an infant is to be brought up by hand, he ought not to be put to the breast at all: weaning him after he has been accustomed to the breast-milk for a few weeks, is exposing him to imminent danger.

I have in a former place mentioned the advantages the sucking bottle possesses over the method of feeding by means of a spoon; it is more particularly applicable in the case now under consideration. Different species of food have been recommended by different authors, but milk is the principal ingredient of them all; and that being the one most congenial to infancy, it is reasonable to give it the preference.

As asses' milk is nearest in its properties to human milk, it is generally recommended as the best substitute, and where it can be obtained, should certainly have the preference. The next best substitute is goats' milk, upon which I have occasionally seen children very successfully reared.

The French seem to entertain peculiar ideas upon the effects produced on children by the different milks, and as I consider them curious, I shall transcribe a passage from M. Gardien on the subject*. “Les enfans que l'on nourrit avec le lait de vache sont lents, moins gais que ceux qui sont nourris avec du lait de chèvre, qui leur donne de l'activité et leur cause souvent de l'insomnie. En changeant de régime, on fait cesser cette insomnie artificielle. Le lait de chèvre donne trop d'activité aux enfans ; il ne convient qu'à ceux qui ont eu des parens scrophuleux ou sujets à quelques maladies dépendant de l'inertie du système lymphatique ; mais dans cette circonstance, on doit préférer le lait de chèvre à tous les autres, quoique, d'après la nature des principes qui le composent, il soit un de ceux qui offrent le moins d'analogie avec celui de femme.”

* Des Maladies des Enfans, vol. iii, p. 499.

When it is deemed necessary to feed a new-born infant, which should not be done very soon after birth, a few tea-spoonsful of new milk, which should be diluted with water, and sweetened with white sugar, is the most suitable from its simplicity. I think Dr. Underwood's plan should be adopted respecting the manner in which the milk should be prepared: "To boil the milk two or three times, waiting after each till it shall cool sufficiently to allow the curd or cheesy part to rise to the surface, which should be carefully taken off."

As the digestive powers of a young infant are very weak, the utmost precaution is necessary to render the food as light as possible; for this reason I recommend that the milk should be boiled, for though by taking off the pellicle, part of the nutritious substance be lost, still as that pellicle contains the *solid* portion of the milk, if I may so call it, its removal must necessarily render the residue more easy of digestion to such young stomachs. In cases where infants suffer much from flatulence, it is advisable to boil a few caraway seeds, or some other carminative, with the food, in a small bag, or piece of muslin. Great care should also be taken not to overload the stomach; but nourishment should be given at first sparingly, and

repeated frequently : and herein the nurse may produce much mischief, as from the idea that the infant is craving for food, or to save herself the trouble of appeasing his cries, she will not only give it to him in large quantities, but at a time when he does not require it. The watchful eye of the mother is necessary to guard against this occurrence, as well as to regulate the periods at which her child should be fed. In some cases a little water-gruel will tend to assist the expulsion of the meconium.

If the infant seem to thrive on his milk diet it should be by no means changed till he have attained the age of four or five weeks ; it might then be advisable to give him once a day a little arrow-root : about the same time the milk should be less diluted with water, as the stomach being stronger will be found better able to digest it. Should the bowels be confined, or should arrow-root not seem to agree with the child, a little milk gruel may be substituted. This kind of food should be persisted in for two or three months, or longer.

The next addition to the milk diet should be a French roll boiled thoroughly in water. When it is sufficiently softened to be beaten through a sieve, it should be rendered still more thin by the admix-

ture of milk, so that it may be taken with ease through the bottle. This is the only variation admissible till the child has attained the age of five or six months, by which time I can see no objection to the use of a little weak beef tea, given cautiously once a day with boiled roll, beaten as before through a sieve, and administered through the bottle.

Objections may be raised as to my recommending any other than milk diet before there are at least four teeth cut, which is the usual period fixed for the change of food. In answer I should say, that the digestive powers of healthy infants, brought up by hand, are strengthened sooner by the comparative solidity of the food, and can therefore undergo a change of diet more safely, and in most cases more advantageously than infants who have been restricted to the breast milk.

This regimen should be continued till the child has attained the age of a twelvemonth, by which time he will in all probability have cut the four first incisores. If he be strong, he may then be allowed about twice a week the lean part of a mutton chop, which should be minced very fine, and mixed with crumbs of bread ; on the intervening days a light pudding or weak broth may be given.

It is of great importance to establish regularity in the hours of feeding a young child. His meals should be given at sufficient intervals for the work of digestion to take place, and he should be by no means allowed to eat between those periods, if we except a small piece of crust of bread, which may be given between breakfast and dinner.

When a child is sufficiently advanced in age to masticate his food properly, or, in other words, when he is no longer considered as "the baby," it is still necessary to persevere steadily in attention to his diet. Though he may be allowed to eat more freely of animal food, he should be restricted to it once a day, and for the first four or five years of his life be entirely debarred from it once or twice a week, substituting on those days a little broth or a light pudding; ground rice is preferable, as it contains a greater proportion of nutritious matter than any other farinaceous substance.

I believe I am almost peculiar in my ideas on one subject, namely, the impropriety of vegetables forming part of the food of young children. I object to their use on this principle: as it is very prejudicial to overload the stomach, and as it is at the same time necessary to keep up the strength of

a growing child by a diet which is light as well as nutritious, it is advisable to give those things which contain the greatest proportion of soluble or digestible matter in the smallest substance. Now as vegetables are not only bulky, containing but a small part of digestible matter, and as they are very apt to produce flatulence and dyspepsia, I should entirely prohibit their use in the nursery.

Let it not be understood that I recommend much animal food to be given at a time : far from it, as a superabundance is as likely to produce a disordered state as an insufficiency of it ; but I think it should be eaten with a considerable proportion of bread, in preference to any description of vegetables. This is more particularly applicable to scrofulous habits, or to children of a delicate constitution. The preparation of their food should be as simple as possible. The meat best adapted for children is mutton either roasted or broiled : the preference should be given to roast over boiled or baked meat.

White meats should always be inadmissible, particularly veal, to which I have a most decided objection ; for I have repeatedly met with most serious cases of indigestion arising from its use. I fully

agree on this subject with the late Dr. George Fordyce, who used to carry his aversion so far as to say that an act of parliament should be passed to prohibit its being brought to market.

Children should be early accustomed to masticate their food, as it tends materially to assist the digestion, and may indeed be considered as the first step towards that process.

Pastry and sweets of any kind are very pernicious. Care should be taken not to allow a child much liquid ; it tends to dilute the gastric juice, and consequently retards the progress of digestion. Toast and water is the best adapted for their drink, as the torrefaction of the bread takes off the chilliness of the water, which I have in some instances seen to produce bad effects, particularly in weak stomachs. With regard to the propriety of wine forming part of a child's daily beverage, I am of opinion that it is decidedly injurious, as it is likely to produce feverish action, and is too great a stimulus to the coat of the stomach from the quantity of alcohol it contains. But though I object to its use as regards children in health, I believe it to act as a beneficial excitant in certain constitutions, where an inactive state of the stomach exists. Madeira or sherry,

particularly the latter, is to be preferred, port wine being prejudicial on account of its astringent properties. Attention to the state of the bowels is of great consequence, and of course the food should be regulated accordingly.

In the few pages I have devoted to the management of childhood, I have given concise directions as to the nature of the food which seems best calculated for children, as I am convinced many an illness might be prevented by a strict attention to regimen; for experience daily teaches us how many of their diseases originate in a disordered state of the stomach and bowels, and which in the majority of cases are to be attributed to errors in diet.

PRACTICAL REMARKS

ON

THE USE OF OPIUM.

IN the few observations which I propose introducing in this place, it would not only be deviating from the plan I intend following in this work, but would be likewise unnecessary, to enter into any discussion as to the manner in which the action of opium is produced.

In children labouring under severe abdominal pain from an irritable state of the intestinal canal, we often find an appropriate dose of opium (it will be understood that I mean any of its preparations), given either in form of draught or enema, produce beneficial and speedy relief. The surface, which was before dry and parched, becomes moist, and is succeeded by a gradual cessation of pain, and probably by a sound and undisturbed sleep. But this picture is sometimes reversed, for instead of being

quieted, the child will start up suddenly, screaming out as if frightened, or he will moan during a restless and imperfect slumber. When opiates produce the latter train of symptoms, I have generally observed, that on the occurrence of slight diaphoresis, the patient becomes tranquillized, and a calm and quiet sleep will often follow. The warm bath will be found of great utility by producing slight moisture on the surface, and should therefore be employed with that view.

The power of opiates, in allaying irritation, is probably nowhere more marked and efficacious than in excessive evacuations from the bowels. In such cases it is in general best to exhibit it in the form of enema; but even in this form caution should guide us in its use. In one instance I have known an injection, containing a very small quantity of laudanum, produce great cerebral excitement, extreme thirst, and vomiting.

In those cases of excitement arising from nervous irritability, its well-timed use will often prove decisive. After bleeding in inflammation of the bowels, opiates will often be found of great use, and should be exhibited per anum. In colic pains they prove highly efficacious, and should never be neglected.

Opium should not be employed where the lungs are affected, where there is a dry cough with a quick pulse. It is contra-indicated in all cases of increased action of the vessels of the brain or its membranes, or where the vascular system is already excited. I have occasionally known a very small proportion of opium give rise to obstinate costiveness, and I should say it produces this effect more generally in weak and delicate children.

In the choice of the remedies we employ in removing this state of constipation, we should be careful not to use drastic purgatives, as their operation is not unfrequently followed by a troublesome and obstinate diarrhœa; a grain or two of calomel with a little rhubarb, or a dose of castor oil, will be found the most suitable. In those cases in which opiates are indicated, and the stomach is in so irritable a state as to be unable to retain them, they may be used in form of enema, or they may be applied by friction, or in form of plaster.

We should be cautious in the application of opium to ulcerated surfaces in children, as absorption has been known to take place, and produce the usual effects of an over-dose of this drug. Opium tends materially to lessen the secretions, more particularly

those of the bowels; it likewise lessens the action of the kidneys, the secretion of urine usually becoming scanty; it tends to lessen perspiration, but this latter effect is not always produced by it, for in some instances it is not interfered with, and in others is increased.

In those cases, where diaphoretics are not contra-indicated, it is always advisable to combine them with the opiate, as their combination tends to produce gentle diaphoresis, and prevent cerebral excitement. The attention of the practitioner should likewise be directed to the state of the bowels, in those cases where opiates are administered to children. I am fully persuaded of the propriety of this advice, from the obstinate constipation I have sometimes witnessed when this precaution has been neglected. The lives of many children are, I have no doubt, annually sacrificed by the indiscriminate and improper use of opiates. I have known three or four instances where the most dangerous symptoms were produced by Godfrey's cordial and Dalby's carminative; two nostrums which have no doubt added considerably to the mortality of infants.

In an instance that lately fell under my obser-

vation, the most rapid and alarming symptoms followed the exhibition of an ordinary dose of syrup of poppies; the child was seized shortly after with great heaviness and tendency to sleep, and the pulse was scarcely to be felt. This state continued for a short time, and was succeeded by difficulty of breathing, deep sighing, and convulsions. In this case it was necessary to rouse the torpid state of the system by the exhibition of a little brandy, and when re-action had taken place, vomiting was immediately produced. The child was kept in constant motion; however, as the stupor and drowsiness continued unabated, the exhibition of ammonia with aromatic confection was employed with advantage. I attributed the recovery of this child principally to a brisk and copious action on the intestinal canal, which was produced by a dose of calomel and jalap, followed shortly after by a purgative clyster. I have in other instances witnessed the good effects of full purging in similar cases, both in children and adults. In another instance I have known half a small tea-spoonful of the syrup of poppies prove nearly fatal to a child eight or ten days old; the usual symptoms occurred in this case, accompanied by violent convulsions. A case has fallen under

my observation, in which five and thirty drops of Dalby's carminative proved fatal to a very young child, while on the other hand I have occasionally known much larger doses given, without producing any alarming effects.

From the trouble attending the preparation of syrup of poppies, when made according to the directions of the Pharmacopæia, it is not uncommon to find a mixture of the tincture of opium with syrup or treacle substituted for it; therefore, from the uncertainty of having it genuine, it is not always to be used without risk in the diseases of children.

In those diseases where opiates are indicated, laudanum is to be preferred from the greater uniformity of its strength; but it should be used with extreme caution even by medical men, as we find from experience, that in some children the smallest dose will produce deleterious effects. I may here remark, that we sometimes meet with adults in whom opiates in any form, and in the smallest quantity, will produce cerebral and general excitement. In corroboration of this fact I may mention a case, which occurred to me a short time since, where three or four drops of laudanum only, given to a lady thirty years of age, gave rise

to great restlessness and constitutional irritation. Some young children will bear three, or even four drops with impunity, while in others of the same age, and apparently of the same temperament, one or two drops will give rise to distressing and troublesome symptoms. Dr. Underwood mentions a case* in which four drops of laudanum were given by mistake to an infant two days old. The child slept for six and thirty hours, at the end of which time it awoke quite well.

The compound tincture of camphor, or paregoric elixir, is often resorted to by nurses for the purpose of procuring sleep in the children committed to their charge. I have witnessed many dangerous effects from its use, and have known an infant nearly poisoned by considerably less than half an ordinary sized tea-spoonful. In those cases where an overdose is given, we must bear in mind that every instant lost, involves the patient in more imminent danger; consequently the necessary measures should be immediately adopted with decision and promptitude.

* See his *Treatise on the Diseases of Children*, p. 200.

PRACTICAL REMARKS
ON
GENERAL AND LOCAL BLEEDING.

CHILDREN from the great delicacy of their constitutions are prone to many diseases, particularly to those of an inflammatory character. From the great vascularity of all the textures, we may in a great measure account for the disposition to inflammatory action, which frequently gives rise to the necessity of abstracting blood, in the performance of which we should be guided by the age, description of constitution, and the extent and violence of the disease. In the commencement of measles, small-pox, scarlatina, and other cutaneous inflammations, where convulsions occur with high delirium, and the child is of a strong and plethoric habit, it becomes necessary to abstract blood by opening the jugular vein. In all those cases in which inflammation attacks an internal part, in cases where there is

great cerebral excitement, or where phrenitis is suspected, general bleeding should be employed. If the lungs or any of the abdominal viscera be the seat of disease, we should open a vein in the arm; while if the brain be the part attacked, blood should be taken by opening the external jugular vein, or a branch of the temporal artery. That the preference should be given to obtaining blood from this source in all cases of cerebral excitement, no practical man will doubt.

I have seldom found any difficulty in opening the jugular vein, however young the child; but in a child under twelve or fourteen months we often find it extremely difficult to open a vein in the arm, owing to the presence of fat, or the smallness of the veins. I have sometimes obviated this difficulty by placing the limb in warm water; the veins then becoming turgid, the operation is rendered more readily practicable. Where these measures are not adopted, we should have recourse to cupping, in preference to leeches.

I am decidedly adverse to trusting solely to the application of leeches in acute diseases, when accompanied by great pain and febrile action. I

found my opinion on the length of time that may elapse before their application is effected, from the uncertainty of taking a determined quantity of blood, and from the slow manner in which this operation is performed. In slight cases of local irritation or inflammation of the mucous membranes, they may be employed with advantage, and may often render it unnecessary to have recourse to general bleeding; but I question how far we are warranted in having recourse to the application of leeches in the early stages of inflammation of any of the serous membranes, when we consider with what rapidity they frequently run their course. We must not always be entirely guided by the state of the pulse, as to the propriety of abstracting blood, as the other usual concomitant symptoms claim a share of our attention; but when we find the pulse hard, full, and regular, it may sometimes become necessary to abstract blood; and where the pulse vibrates with a tight wiry pulsation, it is equally indicated.

In children of a delicate and weakly constitution, bleeding should always be employed with caution. If the patient be a very young infant, or if it be necessary to take a small quantity of blood only,

cupping or leeches should be the means of abstracting it; and where the sudden loss of blood could not be borne, the latter will often be found of great utility. A child labouring under enteritis, or abdominal inflammation, will in general bear the loss of blood badly; but where thoracic inflammation exists, the contrary is the case.

We must bear in mind, that in children the pulse will often be found to become stronger and more frequent after bleeding; though I do not mean to infer that this result is peculiar to them: I think it however of consequence to attend to it, more particularly during early life, as a want of attention to this fact might lead to an unnecessary repetition of the depletion. The pulse of an infant, when in health, generally averages 120 pulsations in a minute. I have known considerable nervous excitement produced in children by cupping (particularly on the chest), and occasionally even in adults. I have likewise known extensive local inflammation produced by this operation, but I have never known it end in suppuration.

In taking blood by leeches, we should prefer their application to those parts over which a compress can be most readily applied, as we sometimes ex-

perience considerable difficulty in stopping the bleeding. Instances are on record of children having died from loss of blood from this cause. A case occurred in my own practice of an infant, where extreme exhaustion had nearly proved fatal from the application of a single leech. I have met with instances in which inflammation, followed by suppuration, has taken place from the bites of leeches.

Whatever may be the surrounding temperature, the blood generally retains its usual heat; but in cases of great increased action, the temperature of this fluid will be found to have increased some degrees. We find the blood in very delicate children coagulate quickly after its abstraction, and in such subjects, where the increased action is not great, it will sometimes coagulate almost as fast as it is obtained.

In weakly habits, where it is of consequence to obtain a small quantity of blood quickly, and to produce a sudden effect on the constitution, we should open the external jugular vein in preference to one in the arm; as one ounce of blood taken from the former source will often be found to affect the whole system quicker, and prove as efficacious, as an ounce and a half taken from the latter. When it is deemed necessary to open a vein

in the arm of a child, the erect posture should be preferred, as a much less quantity of blood (and this is no small advantage) will generally be found to produce the desired effect. In children labouring under inflammation, we generally find the blood exhibit the usual buffy coat; but in very young children, owing to its quicker coagulation, this appearance is not always to be discerned.

From what I have been able to deduce from observation and practice, I should say that a child from six to eight months old will generally bear the loss of about two ounces of blood, and the same quantity may often be taken away from fourteen to eighteen hours afterwards, should further depletion be deemed necessary. A child of a year old may lose three ounces, and an ounce and a half or two ounces more may be taken in ten or twelve hours, should the urgency of the symptoms not be relieved. A child of this age will seldom bear the loss of more blood with impunity; but we sometimes meet with instances in which an ounce and a half or two ounces more may be taken away with advantage, in the course of twelve or eighteen hours after the second bleeding.

From what has been said respecting the extent to

which bleeding may be carried, it must not be supposed but that very many exceptions will occur in the course of practice; as children will be found to vary very much in their capabilities of bearing the loss of blood, and to this fact I strenuously recommend the attention of the practitioner. I have already alluded to an instance in which the loss of a small proportion of blood produced very great exhaustion; and in other cases I have known children, who, either from accident or the orders of the medical attendant, have borne great depletion without suffering very materially from the loss. I think, however, that there is often much time lost by the timidity of practitioners, both in bleeding as well as in the exhibition of purgatives, as they are frequently not aware to what extent either of those remedies may be advantageously employed in the diseases of children; while, on the other hand, I grant that too bold a practice may become equally reprehensible and injurious.

I consider this an appropriate place to allude to a valuable and interesting essay from the pen of Dr. Marshall Hall*. The object of the author

* On a Morbid Affection of Infancy, &c. p. 8.

is to direct the minds of practitioners to that state of exhaustion that sometimes occurs in early infancy from diarrhœa, or catharsis, or during the later periods of infancy, from the unnecessary abstraction of blood. Dr. Hall divides this morbid affection into two stages.

“ The first that of irritability, the second that of torpor: in the former there appears to be a feeble attempt at reaction, in the latter the nervous powers appear to be more prostrate. These two stages resemble, in many of their symptoms, the first and second stages of hydrocephalus respectively. This morbid affection has, as I have stated, usually been first induced by some change in the diet, by which the stomach has been loaded or disordered, and the bowels perhaps affected with diarrhœa; and this latter state has frequently been exasperated by the untimely administration of an aperient medicine.

“ The infant becomes irritable, restless, and feverish; the face flushed, the surface hot, and the pulse frequent; there is an undue sensitiveness of the nerves of feeling, and the little patient starts on being touched, or from any sudden noise; there are sighing, moaning, during the sleep, and screaming;

the bowels are flatulent and loose, and the evacuations are mucous and disordered. If, through an erroneous notion as to the nature of this affection, nourishment and cordials be not given; or if the diarrhœa continue, either spontaneously or from the administration of medicine, the exhaustion which ensues is apt to lead to a very different train of symptoms. The countenance becomes pale, and the cheeks cool or cold; the eyelids are half closed, the eyes are unfixed, and unattracted by any object placed before them; the pupils unmoved on the approach of light; the breathing, from being quick, becomes irregular and affected by sighs; the voice becomes husky, and there is sometimes a husky teasing cough; and eventually, if the strength of the little patient continue to decline, there is crepitus, or rattling in the breathing; the evacuations are usually green; the feet are apt to be cold. A similar train of symptoms occurs in other cases, in which the strength of the little patient has been subdued, and the vascular system exhausted by the abstraction of blood. In both cases leeches are sometimes again applied to subdue this new form of disease, under the erroneous notion of a primary cerebral

affection. This measure infallibly plunges the little patient into imminent, if not irretrievable, danger. Sometimes the sinking state goes on, in spite of every appropriate remedy. Stimuli, if efficacious, reduce the frequency of the pulse, and restore the wonted warmth, colour, expression, and smiles to the countenance. The condition of the cheeks, in regard to colour and warmth, may be considered as the pulse of very young infants, indicating the degree of remaining power, or of exhaustion. In the present state especially, there is no symptom so important, so distinctive. It is from the condition of the cheeks, in conjunction with a due consideration of the history, that the diagnosis of this morbid state, and the indication of the appropriate remedies, are chiefly to be deduced. The general surface, and especially the hands and feet, also afford important sources of information as to the condition of the nervous or vital powers. Next to these, the degree of frequency of the pulse and the character of the breathing are points of the greatest importance. During the stage of irritability, the breathing is quick; during that of torpor, it is slower, irregular, suspicious, and finally crepitous; the pulse

changes in its beat, from being full becoming smaller, but retaining, perhaps, its former frequency."

Dr. Hall very properly recommends our "relinquishing all lowering remedies, and adopting a cordial and soothing plan of treatment."

RETENTION OF THE MECONIUM.

RESPECTING the use of the meconium in the economy of the fœtus, it would be useless for me to enter. It sometimes becomes a source of great irritation, if retained long after birth, producing flatulence; griping pains and vomiting not unfrequently take place, from sympathy. If these symptoms be not quickly relieved, considerable constitutional irritation will be the result. To produce its expulsion, a small tea-spoonful of castor oil, given in an equal quantity of dill water, should be directed, in the repetition of which, we should be guided by the urgency of the case. A warm bath may hasten its operation. I consider suppositories or enemas particularly applicable, from the circumstance of the accumulation only taking place in the large bowels. An early employment of them will often supersede the necessity of the exhibition

of purgatives by the mouth. I have occasionally found gentle friction aid considerably the effects of whatever medicine may have been employed. Many authors have referred the cause of this retention to a spasmodic action of the sphincter ani, in the treatment of which they condemn the use of purgatives, and advise warm baths, fomentations, &c.

In a case of obstinate retention that fell under my observation a short time since, which resisted all the means employed for four or five days, and which, from the existing circumstances, I attributed to spasm, was at last relieved by the application of the extract of belladonna and opium to the verge of the anus. This is the only case of the kind I have met with: indeed, I believe the retention of the meconium to be of rare occurrence from this cause. I am well aware that in the generality of cases the milk of the nurse will be found sufficiently stimulating to produce its expulsion: under these circumstances the exhibition of medicines will be unnecessary.

INFANTILE JAUNDICE.

SOME children soon after birth have a yellowish tinge on the skin, which generally disappears in a week or ten days; the whites of the eyes do not partake of the yellow colour, nor is the urine tinged by it. The motions may be of a yellowish or dark green colour; it is therefore necessary to know that this does not constitute disease, but seems to be an intermediate state between the usual red appearance of the skin and the assuming its natural colour. I have generally observed, that those infants who have this yellow tinge soon after birth have a fairer and clearer complexion than those whose skin does not undergo this change.

I believe jaundice to be of rare occurrence in children. It is characterized by a yellowness of the skin, the eyes are of the same hue, the tears will sometimes partake of the same colour, the urine will tinge the linen, the motions will be of a light or clayish colour,

demonstrating at once the absence of bile. An irritable state of the stomach, constipation of the bowels, and flatulence will sometimes exist. Should these symptoms continue, the child will become remarkably irritable, and emaciation will follow. When such symptoms exist, the presence of jaundice cannot be doubted. Should the obstruction to the passage of the bile to the duodenum be temporary, as is the case sometimes from a viscid state of that secretion, the remedies pointed out will often prove successful; but when there is permanent pressure upon the ducts by any of the surrounding parts, the fatal result must be obvious.

Treatment.

If the child be strong we should give it a gentle emetic, but in those of a tender age and of a weakly and irritable constitution emetics should be given with great caution, as their action will not unfrequently produce cerebral excitement; and I may here remark, that we are seldom warranted in having recourse to this class of remedies, the too indiscriminate use of which I have frequently known to be productive of the most serious consequences.

The great object in this disease is to produce a healthy appearance of the evacuations, and the chance of recovery would seem to depend on the speedy appearance of such change. To effect this, we should give the patient a dose of calomel, which may be followed by a small quantity of castor oil every two or three hours, till the bowels be freely acted upon. We should then order twice or thrice a day a little calomel, sufficient to keep up an action on the bowels. When the motions become mixed with bile, the calomel should be given in smaller quantities, and continued until the fæces assume a decided permanent and healthy appearance. Should diarrhœa take place, the calomel should be discontinued, substituting a mixture of aromatic confection and small doses of laudanum; and after its cessation we should again have recourse to the calomel, which is the remedy after all upon which we must mainly depend. The warm bath will often sooth and comfort the child, and may be therefore employed. He should be amply supplied with a good breast of milk.

THRUSH.

PROBABLY the most common disease to which children are liable, is that which I am about to consider. In the majority of cases the thrush is of so mild a nature, as to require little more than the skill of the nurse: however, I have sometimes seen it assume appearances of malignancy, requiring the most prompt and efficacious treatment. It must however be acknowledged, that the disease in its malignant form is seldom met with in England; but in the Hôpital des Enfants Trouvés in Paris, the thrush is not unfrequently ushered in, or terminates in fever of a contagious and dangerous character.

The symptoms and appearances of common thrush are so well known as scarcely to be worth describing. The eruption first appears on the inner surface of the cheeks, and on the lips, tongue, uvula, &c. in the form of little white curdy specks, frequently with an inflamed base, and sometimes lining the whole

cavity of the mouth. There is little or no fever, the motions will be found of a green colour, and offensive to the smell; but this is not always the case, as the aphthæ sometimes appear equally extensive, and indeed the disease altogether bordering on a malignant form, where the secretions and excretions have been carried on apparently with much regularity. Where the disease goes through its course favourably, the little sloughs are thrown off, and in the course of a few days the patient is well.

I have known the thrush to disappear and return frequently within twenty-four hours; when this is the case the disease is of little moment, and will generally be removed when the cause (namely, the acidity of the stomach and bowels) is corrected. I may here add, that there is a predominance of acid in nine cases out of ten. In such cases we cannot employ any thing better than magnesia, as, while it counteracts the acidity in the *prima via*, it acts likewise as a gentle evacuant; and should it not be found to produce the latter effect, it may be combined with rhubarb. As a local application, we may use a solution of borax in syrup of tolu or honey, or a weak solution of sulphate of zinc,

which will generally dispose the aphthæ to throw off the sloughs.

In respect to local applications in this disease, I cannot agree with Drs. Underwood and Hamilton, who think they do harm when used early in the complaint; as I am of opinion that they not only promote cleanliness and comfort, but dispose the sloughs to come away much sooner than they would otherwise.

I believe the disease in the first instance to be an inflammatory state of the mucous membrane or its follicles, consequently we are warranted in using local means from the commencement, in conjunction with our internal remedies.

There is one form of thrush preceded by constant heaviness or sleepiness, with an obstinate torpid state of bowels, which I have occasionally met with, occurring in children from eight to ten months old, during the period of dentition; in this case the eruption will be found larger than usual, perfectly distinct, and more tardy in making its appearance: pressure upon the epigastrium sometimes produces great pain, the mouth will be found hot, and altogether the child appears to labour under

considerable uneasiness. The symptoms are not at all times alleviated on the full appearance of the aphthæ, but on the contrary seem to increase in violence, till the stomach and bowels are thoroughly cleansed out. This is a case requiring early purging, for if we wait too long, symptoms of malignancy begin to appear, which might act as a preventive to the exhibition of purgatives, or the brain or its membranes become insidiously affected. In such cases, I generally exhibit a little calomel in combination with chalk, followed by a dose of the *oleum ricini*, or a draught of infusion of senna with the sulphate of magnesia; upon the operation of which the good effects are immediately evident. As a local application we may use the borax in form of linctus, or wash, or a weak solution of the diluted sulphuric acid in syrup. I know not that this form of the complaint has been noticed particularly by any other person, but such cases have occasionally fallen under my observation. I have never seen the pustules in this description of the complaint extend beyond the uvula and tonsils.

The thrush will sometimes continue to spread through the course of the *œsophagus*, stomach, and bowels, to the verge of the anus, but such cases I

believe seldom occur. From the excoriated and inflamed state of the latter part, which is so frequently produced by the irritable nature of the stools, it is supposed that the aphthæ have extended through the whole course of the alimentary canal. The part may be anointed with a little cooling ointment, or a poultice may be applied, composed of linseed meal and a weak solution of Goulard water.

I saw a case some time since, where I had little doubt but the disease ran its course to the verge of the anus. I thought so in consequence of seeing a large quantity of aphthæ come away in the motions, while the appearance of the mouth remained unaltered, without producing any symptom of intestinal irritation worth relating. However, this is a solitary case, for such a state of things is in general characterized by pain being produced when pressure is applied to the abdomen ; the child will be observed to draw its knees upwards, and with griping pains to expel stools of a watery and extremely offensive nature ; there is a pulse of excitement ; the stomach is so irritable that it will not retain the milk, and the child vomits directly any thing that is swallowed ; there is sometimes cough, and deglutition is performed with great difficulty.

The thrush will sometimes continue for weeks or months, but it more frequently runs its course in a few days. When the aphthæ begin to throw off the sloughs, the child sometimes suffers much pain when at the breast, and not unfrequently the nipple of the nurse becomes ulcerated and highly painful. I have found a wash of alum or zinc useful applications in such cases. I have in a few instances known the disease to extend to the trachea and bronchiæ: the symptoms produced in those cases were nearly similar. There will be found to exist great excitement and difficulty of breathing, constant hacking cough, fever runs high, and the extremities are frequently so remarkably cold, that it is with difficulty we can warm them; and indeed, no sooner is that accomplished than they become cold again: in those cases I trust almost entirely to purgatives with success. This extreme coldness of the extremities is a usual concomitant where bronchial irritation shows itself.

A formidable case of malignant thrush fell under my observation a short time since: it occurred in a child about two years and half old. The aphthæ were from the commencement of a brownish hue, and in the course of a day or two became nearly

black, the teeth were loaded with a brownish fur, there was a copious flow of saliva, the breath was remarkably offensive, resembling much that of a person in a state of salivation; the pulse was of a quick and jerking nature; no appetite whatever; in fact the mere appearance of food produced a sensation of nausea: there was universal lassitude. In this case I commenced with a dose of castor oil, which was retained by the stomach, and operated well. This was followed the next day by a gentle emetic, which brought away an almost incredible quantity of bilious matter for so young a child, after which I treated the case with bark and ammonia. The only local application used was a lotion, composed of decoction of bark and muriatic acid. This case got well; but I must confess I was not over-sanguine in my prognosis when I first saw the child. That the derangement of the intestinal canal was the exciting cause of the disease in the above case no one can doubt.

I have now and then seen the thrush conveyed from one child to another, by being put to the breast where the nipple was already excoriated by the disease.

In warm climates this disease is seldom met with,

while in northern countries, of a cold marshy nature, it is not uncommon, at least this is the opinion of Boerhaave and Van Swieten. In some parts of Holland the disease is said sometimes to have raged as an epidemic. It is no doubt occasionally idiopathic; but in the greater number of cases it is symptomatic of a disordered state of the organs of digestion, produced by improper aliment, or by a weakened state of the stomach.

For a more detailed account of this disease, see *Traité des Maladies des Enfants*, par M. Billard.

PURULENT OPHTHALMY.

THIS disease sometimes lays the foundation for ophthalmic affections of a formidable and dangerous nature, giving rise to a total loss of sight of one or both eyes. It is now and then very difficult to account for its occurrence, particularly when occurring at or soon after birth. I have met with it frequently when upon investigation I have learned that the mother has laboured under leucorrhœa. I have likewise traced it to the application of the matter of gonorrhœa, which the eyes must have received in transitu; but it is undoubted the disease often exists where the mother is perfectly free from either complaint. It generally appears within a week or ten days after the birth of the child; it first shows itself by a swelling of the eyelids, the inner surface of which appears inflamed; the child becomes remarkably irritable from the pain and itching, and the eye cannot bear the stimulus of light. If this

state of things be not speedily attended to, the formation of matter takes place, the primary symptoms increase in violence, and extend to that part of the conjunctiva covering the globe of the eye; a degree of ectropium follows, purulent matter is discharged, and the edges of the eyelids adhere together; the pus continues to accumulate, and by separating the eyelids it immediately escapes; the matter thus discharged is generally of a light straw or green colour; sometimes streaks of blood will be found in it, and it varies much in consistence.

When the inflammatory action begins to lessen, the tumid state of the eyelids gradually decreases, the formation of pus is less abundant, and it assumes a lighter and thinner appearance; the eye is not so sensible to the stimulus of light, and the patient will be observed to open it a little. The period of its continuance is variable, but it will generally yield if the timely application of the proper remedies be had recourse to; but where the disease has been of long duration, and organic alteration of structure has taken place, the result must be doubtful.

Treatment.

Our first object in this disease is to take away blood, which may be done by applying a leech or two to the eyelid; some recommend their application to the external angle of each eye. I myself prefer scarifying the conjunctiva, as it is attended with much less trouble to the patient, and will sometimes afford speedy relief. To relieve the ectropium that commonly exists, an emollient poultice may be applied, while strict attention must be paid to cleanliness and to the state of the stomach and bowels.

A lotion composed of a weak solution of the liquor plumbi will be found a useful application. After the discharge of matter has commenced, our object must be to put a stop to this morbid secretion, by giving tone to the vessels of the eyelids and conjunctiva. For this purpose, Bates's aqua camphorata, though a very unchemical compound, in the proportion of one drachm to about two ounces of water, frequently proves an excellent application: it was highly extolled by the late Mr. Ware. An astringent wash, com-

posed of a weak solution of alum, sulphate of zinc, or the liquor plumbi, will be found a useful application, and should be employed by means of a syringe two or three times a day, or more frequently, according to the urgency of the case.

It has not always appeared to me desirable to apply blisters in the inflammatory stage ; but during the suppurative, I have sometimes produced a little irritation behind each ear, by means of a plaster of tartar emetic, with good results. The same mode of treatment I believe to be equally applicable, from whatever source the disease may have arisen ; however, in obstinate cases, and where a venereal origin is suspected, it may be advisable to exhibit small doses of calomel, or hydrargyrum cum creta, as an alterative, pursuing at the same time the plan already pointed out.

COLIC. FLATULENCE. ACIDITY.

THE presence of acidity in the stomach, constipation of the bowels, improper aliment, and not unfrequently the bad or poor quality of the breast milk, will produce the complication above mentioned. The child will be observed to scream out suddenly, to draw his knees towards the abdomen, which will be found hard and tense ; he will be restless and irritable, and probably refuse the breast. When the bowels are in a weakened and sluggish state, this disorder may be ushered in by a slight diarrhœa. Should the latter symptom prove troublesome, it will be right to give the child a little draught of the cretaceous mixture, to which have been added a few grains of aromatic confection, and a drop or two of laudanum ; of course varying the exhibition and dose of the latter according to the age, &c. of the patient. This plan will generally relieve the urgency of the symptoms, but the cause

may still remain, and may be removed by the exhibition of castor oil, or some warm laxative. Should the opposite state (constipation) exist, it will be necessary to produce a speedy evacuation from the bowels by means of calomel, in conjunction with warm laxative clysters; and in the interim, should the pain continue with violence, the warm bath, or poppy fomentation, will be advisable.

In the common windy colic, a little friction applied to the abdomen will often suffice to increase the peristaltic motion of the intestinal canal, and the child will be relieved by the consequent expulsion of flatus. Should this not succeed, we may give a few drops of the compound spirit of ammonia in a little dill water, or a drop of one of the essential oils. Where these attacks are frequent, we should have occasional recourse to gentle laxatives. When the complaint is caused by the presence of acidity, the evacuations will have a sour smell, and be of a green colour; the breath will likewise have a similar odour. A laxative draught, composed of a few grains of magnesia and rhubarb, or a tea-spoonful or two of castor oil may be exhibited; after the operation of which a cretaceous and carminative mixture will be of use. In some

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cases of flatulency, I have derived excellent effects from a combination of the extract of henbane and hemlock with ipecacuanha, in minute doses : the *modus operandi* of this compound I do not pretend to solve. Should the acidity of the stomach be still great, a gentle emetic of ipecacuanha may sometimes be given with advantage.

This disease is frequently produced by a want of attention to the nature of the child's food. When sufficient care is taken of this, in point of quality and quantity, we may generally prevent the occurrence of this disordered state. Gentle laxatives should be given occasionally ; and if the digestive powers be weak, which is generally the case when diarrhœa is a concomitant, a light tonic of infusion of gentian, cascarilla, or columba, with a few grains of the sub-carbonate of soda, will be necessary.

DIARRHŒA.

IN a healthy infant at the breast, the evacuations ought to be of a yellow orange colour, free from any offensive or sour smell, and of a pulpy consistence, or custard-like appearance. Two or three motions in the course of the day are about the average number. From the presence of acidity, the evacuations sometimes assume a green colour, are curdled, and have a sour smell; and from the susceptible and delicate state of the intestinal canal, the peristaltic motion becomes increased, and thus diarrhœa may be produced. We may lay it down as a general rule, that where the motions are of a green or dark colour, or of a very thin consistence during suckling, a more or less disordered state of the digestive apparatus exists. In some instances the bowels are so susceptible, that the slightest alteration in the secretion of milk will

give rise to a mild diarrhœa. In this case, a few grains of magnesia, or some absorbent powder, will generally be found a sufficient remedy.

Diarrhœa may occur at any age, but it would appear to be more frequent from the time of weaning to the age of two or three years. The circumstance of its occurring more frequently at the period of weaning, may be accounted for from the change of diet, which may be insufficient, or of a quality not suited to the powers of digestion. On the other hand, the stomach may be overloaded with food, which, however proper and easy of digestion, may be equally the cause of diarrhœa. I have not unfrequently known it to be produced by suddenly discontinuing the breast milk, before the stomach has been sufficiently prepared for the change. I should therefore recommend, that when a child has arrived at age when weaning may be safely adopted, he should begin by taking one meal in the day of that food on which he is afterwards to be fed. The intervals between his being placed to the breast should be gradually increased, till he is accustomed to be fed only during the day. When the stomach seems to have become habituated to the change of diet, the nurse

should then wean him entirely, by not giving him any thing during the night, excepting a little milk and water if he should seem thirsty or exhausted by crying. Where this plan has been adopted, I have rarely found any bad effects produced by weaning. Among other causes, we may name the administration of strong purgatives, which irritate and weaken the bowels, giving rise to acidity and flatulence. Emotions of the mind may occasionally act as an exciting cause.

During dentition, the occurrence of diarrhœa is not uncommon, from sympathy with the inflamed and irritable state of the gums. Exposure to cold, or a sudden suppression of perspiration, unripe or ascescent fruit, veal or pork, either a disordered secretion of bile, or a superabundance of that fluid, may give rise to it. When the latter is the case, the evacuations are green, sometimes approaching to black. The motions in either case may be in a curdled state, and the smell very sour; they may be of a mucous or slimy nature, of a green or almost white colour. They sometimes nearly resemble mortar, or are of a clay colour: in either case the smell is very offensive. I have known copious evacuations of this description come away

for several days, in a much greater proportion than the quantity of aliment taken by the child. They may be mixed with blood, and may sometimes be of a watery, highly offensive nature, and of a dark green or brownish colour.

A slight diarrhœa sometimes takes place where the dejections continue for a time of a healthy appearance. In some children spontaneous diarrhœa will take place from no apparent cause. Such attacks should not be hastily checked; for by an incautious interference, we may create mischief of a troublesome character.

I have sometimes known as great debility succeed a slight diarrhœa, even in an apparently healthy child, as in others in whom the evacuations have been copious and continued. On the other hand, I have known the disease continue for several days without producing any debilitating effects on the constitution. In some cases the child is harassed with sickness, the irritability being so great as to cause the immediate rejection of any food or medicine as soon as it is swallowed; and in some instances there is a simultaneous action of the bowels.

Those children whose health is naturally delicate,

or who are debilitated by previous disease, are always bad subjects for diarrhœa. An aphthous state of the mouth is not uncommon. A quantity of flatus will sometimes escape with the motions, previous to which the child strains and appears very much griped ; at other times the evacuations are ejected suddenly and violently. A continued and severe diarrhœa will often give rise to febrile symptoms. The appetite is often very much impaired : in other instances it is greater than usual.

There is one variety of this disease, which has obtained the appellation of watery gripes. In this case the evacuations are, as the name implies, watery ; they are very frequent, and are sometimes remarkably offensive. The child is feverish, with a dry, and probably hot skin, and is remarkably fractious. Should this state be allowed to continue, a wasting and great debility supervene, from an imperfect formation and absorption of chyle, which ultimately terminate in death.

The post mortem appearances of those who die of this disease are by no means the same ; however, we may often find appearances that warrant us in supposing that inflammation of the mucous membrane of the bowels had existed, and we occa-

sionally find that membrane in a decidedly inflamed state; in other instances it will be found thickened or thinner than usual, or of a very pale colour. Intus-susceptions are not uncommonly met with, while the glands of the mesentery are sometimes inflamed, or enlarged. I cannot altogether agree with Broussais, who is of opinion that the mucous tunic is always inflamed in this disease; but when the child is observed to be very uneasy and restless, constantly drawing his legs towards the abdomen, and that pain is produced by applying pressure to that part; if slight febrile action exist, indicated by the pulse being more frequent, while the surface of the body is hot; and if the tongue be red and dry, and the motions slimy, offensive, and streaked with blood,—we may fairly presume that inflammation exists to a greater or less degree. The appearance of blood in the stools, unless accompanied with the other symptoms, must not always be considered as a concomitant of inflammation. But I have little doubt that diarrhœa may occasionally exist with all these symptoms, when there is no inflammation present. I have not unfrequently seen patches of ulceration in the large intestines, in cases in which the patients were in no

way the subjects of pain during the course of the diarrhœa. In those cases which have fallen under my observation, where ulceration was discovered after death, the motions have generally been of a dirty yellowish, green, or sometimes brown colour, and invariably offensive.

Treatment.

In mild cases of diarrhœa, not attended by symptoms of pyrexia, pain, &c., it will be necessary to exhibit a mild laxative of castor oil, or a draught composed of a few grains of magnesia and rhubarb, with a little aromatic confection, in one of the distilled waters. In some cases a dose of calomel, however young the patient may be, is to be preferred, where the disease is caused by the presence of any very crude or indigestible substance. If nausea or sickness be present, a gentle emetic will be advisable before the exhibition of the laxative; but should there be symptoms of fever and irritation, the warm bath may be used, or a few drops of laudanum in a little starch or gruel, may be thrown up in the form of a clyster; and indeed in all cases attended with much pain, from whatever source the diarrhœa may have arisen, this latter

remedy will generally be found safe and highly efficacious.

That variety of diarrhœa known by the name of watery gripes, sometimes proves very obstinate, and is difficult to treat. In most cases I believe the cause will be found in the presence of some offending matter in the bowels, generally in the ileum or cœcum, producing an irritable state of the mucous membrane, at the same time stimulating the exhalants, by which they throw out an increased quantity of fluid; the motions are generally highly offensive, varying in colour, but are in some instances very dark. When it is unattended by any symptoms of fever or local inflammation, a dose of calomel and rhubarb, with a few grains of the compound cinnamon powder or ginger, should be given. Should there be much sickness, indicating the presence of irritating matter in the stomach, a gentle emetic should be directed. In some cases there is much pain produced by pressure applied to the abdomen, the skin is hot and dry, with more or less febrile excitement. As such symptoms indicate inflammatory action, the application of a few leeches must not be neglected, while the exhibition of some mild laxative with

warm fomentations becomes necessary. Castor oil will be found the best adapted to this case. Should the evacuations be still unaltered in number or appearance, the frequent exhibition of clysters composed of starch and laudanum should not be omitted, while a draught of the compound chalk mixture with aromatic confection, to which it may be necessary to add a little laudanum, should be repeated at intervals. I have often witnessed the good effects of opiates, both taken internally and given in the form of injection. In this variety of the disease, they will very often reward our endeavours, if exhibited with judgment, by so far lessening the frequency of the evacuations and violence of the disease, as to leave little more than a mild laxative can ultimately accomplish, by producing a gentle action on the bowels, and thus removing any offending matters that ought to be ejected; but at the same time I must premise, that great caution and discrimination should be observed in the exhibition of opium in any form to very young children.

When diarrhœa occurs during the time of dentition, lancing the gums will sometimes be sufficient to stop it, and should never be neglected where the

gums are swollen and inflamed, while a gentle laxative may be necessary. Two or three grains of hyd. cum creta, with three or four grains of rhubarb, may be given with advantage at bed time. The occurrence of a moderate relaxation at this time should never be interfered with, as long as the constitutional powers of the child are not disturbed. The stools in this variety vary much in colour; they are often pale, and sometimes of a clay colour. This appearance may continue after the total cessation of the diarrhœa; in such cases I have found a draught, composed of the infusions of gentian, rhubarb, and cloves, with a few drops of the sp. ammon. comp. of great utility; it may be given twice a day, and it will sometimes be necessary to prescribe alterative doses of calomel at bed time. In children already weaned, we not unfrequently find the motions very much curdled, and of a pale and almost white colour. When children of a gross full habit are attacked by it at this time, it very often prevents the occurrence of head symptoms.

I have occasionally known immediate cerebral excitement produced by a sudden stoppage of a salutary diarrhœa. Sometimes the child suffers from pain in the bowels, which may be generally

relieved by a gentle laxative; this if not sufficient may be assisted by an opiate enema, which will mostly produce calm and a cessation of pain.

After a long continuance of diarrhœa, kept up by obstinate and painful dentition, the digestive functions often become impaired, and acid is generated in the stomach and bowels; the motions assume a grass or dark green colour, and have a sour and offensive smell. The chalk mixture with rhubarb and aromatic confection will be here necessary; and should the motions become slimy, and the disease have made any impression on the constitution, it will be advisable to direct a nutritious diet, such as beef tea, chicken broth, or jelly, and in some cases the decoction of bark or a little wine may be necessary. In this species of diarrhœa, we should be more careful in the exhibition of opiates.

Where we suspect an inflamed state of the mucous membrane to exist, either as an exciting cause, or as a consequence of the disease, it must be obvious that those medicines only should be given which produce the least peristaltic motion of the intestinal canal; we must therefore be very circumspect what laxatives we employ. The most safe and efficacious remedy of this class is castor oil, a

dose of which may be given, and the child placed in a warm bath; and if the symptoms be not alleviated, leeches should then be applied to the abdomen or to the anus, their application to the latter part is not uncommon on the Continent. “C’est le moyen le plus sûr de prévenir la phlegmasie de la membrane muqueuse intestinale, dont l’enfant est menacé dans ce cas*.” After the symptoms are relieved, my usual practice is to direct a small opiate enema, not exceeding a couple of ounces, a larger quantity under these circumstances being seldom retained. It will generally be found to calm, tranquillize, and allay the inordinate action of the bowels. Afterwards, small doses of rhubarb and calomel will be found of use, or the hyd. cum creta as an alterative may be ordered with advantage.

In those cases already alluded to, where the evacuations are too frequent, but still retain a healthy and natural appearance, and no symptoms of excitement are present, it may be as well to give a few grains of rhubarb and magnesia, with an aromatic twice or thrice a day. Should this plan be still resisted by the continued frequency of the motions,

* Gardien des Maladies des Enfants, p. 199.

an opiate clyster will generally be found to answer the purpose.

Where the evacuations are very offensive, suddenly ejected, or squirted out as it were, and are of frequent occurrence, debility generally takes place soon, and is sometimes extremely rapid in its progress. We should endeavour to stop the frequency of the stools; and to accomplish this, we must have immediate recourse to opium in some form or other; in fact, in such a case, it is on that remedy we must chiefly rely. A mixture of infusion of catechu and the cretaceous mixture, with aromatic confection, and a few drops of laudanum, will be found a useful combination, while an opiate clyster is thrown up from time to time; and should this plan prove ineffectual, a little calomel with three or four grains of prepared chalk may be directed in conjunction with it every eight or ten hours.

About the time of weaning, a very tedious and troublesome diarrhœa sometimes takes place; it has been termed *atrophia ablactatorum*, or weaning brash. It mostly attacks weakly subjects. The evacuations are of a green colour, but vary in this respect as the disease proceeds, and towards its termination it is not uncommon to find them consist

of whatever aliment the child has taken, which passes through the stomach and bowels in the same state as when it was swallowed. Should this latter appearance of the motions continue, the result may be anticipated, the child falls into a state of marasmus, and death quickly ensues. If the disease be produced by a sudden retrocession of an eruption, the warm bath should be had recourse to, a judicious use of which will often promote the re-appearance of the eruption, and with it a cessation of the diarrhœa. However, should the bath not be found to produce the desired effect, a little counter irritation should be produced, for which purpose I have occasionally applied the tartar emetic ointment to the nape of the neck, in conjunction with the bath, and have often succeeded in my object.

The motions in diarrhœa are sometimes of a very mucous and slimy nature, streaked with blood: in such cases a gentle effect should be produced on the bowels by a dose of castor oil; after which a little draught of infusion of orange peel, with a few grains of prepared chalk and aromatic confection, may be given two or three times a day. The stomach is often in a very irritable state in the earlier or subsequent part of the disease. Should it have

been produced, as it very often is, by suddenly depriving the child of the breast milk for a diet he cannot digest, and that probably at a time when he is least prepared for such a change, the nurse's milk must be again returned to; and if this be not practicable, asses' milk should be substituted. Small doses of rhubarb and the cretaceous mixture with an aromatic will be found of use, while the exhibition of calomel as recommended by Dr. Cheyne should not be neglected. The effects of this remedy are often very decided: it should be given in small doses night and morning; the child must be warmly clothed, particularly about the abdomen, which should be kept warm by means of a flannel roller. The tepid bath will be of use when the child is irritable and feverish; and if it appear griped and uneasy in the bowels, an opiate clyster will often be of great use.

In the treatment of diarrhœa, the first step will be to ascertain the cause of the disease, and therefore as general rules we should observe, that if it proceed from a disordered secretion of milk, the cause should be removed; and if this be not speedily practicable, the nurse must be changed. If it arise from painful and tedious dentition, the cause

may sometimes be with certainty removed by the simple operation of lancing the gums, followed by a dose of castor oil, or a mild dose of calomel or rhubarb. If the disease has arisen from the use of improper or unwholesome food, it becomes necessary to change it for one of a better description, and more suited to the powers of digestion. Should the stomach be irritable from the presence of offending matter, it must be removed by a gentle emetic, after which a laxative is advisable; and where either a scanty, redundant, or vitiated secretion of bile is the exciting cause, the healthy action of the biliary and digestive apparatus demands our attention.

During the progress of diarrhœa a light and nutritious diet should be directed, the nature and description of which must be regulated by the existing symptoms, age of the child, &c. In our choice of food, we ought to be careful not to select that of a heating or stimulating character, particularly where febrile symptoms accompany the irritation of the bowels; and I may here remark, that feverish action, however slight, is almost always a concomitant. If the child be at the breast, he must be restricted to that alone: should he be

weaned, the nourishment best fitted for him is arrow root, tapioca, sago, or baked flour. This latter species of food will often be retained by the stomach, and as it possesses slightly astringent properties, will be found particularly applicable in such cases. The addition of a few grains of nutmeg or ginger to either of the above, will render them more grateful and agreeable.

In most cases of diarrhœa, nourishment should be given frequently and in small quantities. Where the constitution is evidently suffering from excessive discharge and consequent debility, calf's foot jelly, beef tea, chicken broth, or a little wine may become necessary. If the child refuse to take nourishment, as is sometimes the case, or the stomach be in so irritable a state as to be unable to retain it, it must be thrown up in the form of clyster, frequently and in small quantities. Should it then be rejected, a few drops of laudanum may be advantageously added. I have known equal parts of beef tea and milk with a few drops of laudanum to be retained better than any other form of nourishment. In all cases of recovery after severe attacks of diarrhœa, I usually direct a light tonic of infusion of columba and cascarilla, which may be given

twice a day; while a powder composed of two or three grains of hyd. cum creta, and a little rhubarb with a small quantity of ipecacuanha, may be taken at bed time. In those cases which have resisted this mode of treatment, I have found steel medicines of singular service: the vinum ferri is a good remedy, and may be given twice or thrice a day in a little cinnamon or dill water. A powder composed of a few grains of the carbonate of iron and powdered calumba will be found a useful combination. An occasional dose of calomel and rhubarb will be necessary; and if change of air be practicable, it will be found materially to assist these remedies.

VOMITING.

WHEN the stomachs of young children are overloaded with milk, they will generally be found to reject it, which is simply an effort of nature to relieve herself; but this cannot be considered as a disease. It is likewise often caused by the nurse's tossing or moving the child just after he has been at the breast. The remedy for this is sufficiently obvious; namely, to keep the child quiet for some time after sucking. Should the presence of acidity be the cause, the motions will be of a green colour, and have a sour smell; the breath will also have a sour odour, and the milk will sometimes be ejected in a firm curdled state. In this case the bowels should be acted upon by a draught composed of rhubarb, with a few grains of the subcarbonate of soda, or it may be combined with a little magnesia.

If the sickness depend upon any acrid matter in the stomach, a gentle emetic of ipecacuanha ought to be administered, followed by a laxative. An irri-

table state of the stomach will sometimes exist from sympathy during dentition, which will generally be obviated by lancing the gums: however, I have known vomiting from this cause sometimes prove very obstinate. A continued vomiting, arising from whatever source, generally produces so much debility of stomach, as often to call for the exhibition of mild tonics and cordials.

I am persuaded that vomiting may sometimes be accounted for by the indisposition of the nurse, or by any sudden or violent emotion on her part; as the state of the mind as well as of the body would seem to influence the secretion of milk, not only in quantity but in quality.

HICCUPS.

THIS convulsive affection in children I believe to be generally produced by an irritable or nervous state of the stomach, of which the primary cause may be referred to acidity. Should it prove troublesome, a few grains of magnesia, combined with a little dill water and a few drops of the compound spirit of ammonia, will generally be found to stop it: but in obstinate cases, a stimulating opiate embrocation may be rubbed over the region of the stomach.

A constipated state of the bowels will sometimes very much influence if not cause this affection; and in the most obstinate case I ever saw, relief was only obtained by the exhibition of a laxative injection, in which assafoetida was dissolved. The quantity of flatus expelled in this instance was remarkable, and the almost instantaneous stoppage of the complaint not less so.

In three or four cases of hiccough occurring in adults, I have known cupping glasses, when applied to the pit of the stomach, speedily stop this affection.

SWELLING AND INFLAMMATION

OF THE

BREASTS AFTER BIRTH.

It is not very uncommon to find the breasts of children soon after birth swollen and inflamed, which would seem to be produced by the presence of a milky fluid. It will almost always become absorbed, if left to nature ; but sometimes, by the officiousness of ignorant nurses, who think it necessary to squeeze out this secretion, the swelling and irritation increase, and require the assistance of the medical attendant.

In the first instance the swelling may in general be readily dispersed by friction with a little sweet oil. If the heat and pain be troublesome, a tepid bread and water poultice, or a spirit lotion should be applied. I have never known suppuration take place, though the inflammation in some cases has run so high as to require the application of a leech ; and in these instances I have found the mischief to have had its origin in the ignorance and mismanagement of the nurses.

MORBID SNUFFLES.

THIS disease is considered by some of so trifling a nature as scarcely to be thought worthy of notice ; but I have known it sometimes to be productive of much uneasiness, and even of danger to the child, particularly in very early infancy, and for this reason I purpose giving it a place in this volume.

The Schneiderian membrane in young infants is so susceptible of irritation, that it becomes readily inflamed. It is not uncommon to hear an infant sneeze soon after birth, produced no doubt by the sudden transition from a warm to a cold temperature. Any of the causes giving rise to catarrhal symptoms may occasion this complaint. It is most prevalent in cold or damp weather. The first apparent symptom is sneezing ; the nostrils will be found upon examination to exhibit appearances of inflammation, such as redness, dryness, and swelling. They are sometimes so much swollen as to prevent

the free passage of the air, the action of respiration being carried on by the mouth; the voice becomes hoarse, and altered in sound. A watery secretion now takes place on the surface of the mucous membrane, and in the course of three or four days, or it may be longer, assumes a thick whitish appearance, which will afterwards become thicker, and have a yellow tinge. The child appears heavy and dull, and upon being put to the breast, from the circumstance of the nostrils being completely closed, is unable to suck from a feeling of suffocation. The consequence is, the child is incapacitated from taking sufficient nourishment, and marasmus may be the result. Convulsions may take place, and I have met with one instance in which cerebral excitement existed to a considerable extent. When the complaint begins to yield, the secretion will gradually lessen in quantity and in consistence; and in a few days it will generally be found to have assumed its natural appearance.

Treatment.

In the simple state of this disease, nature will generally effect a cure; but should it appear obstinate, the child may be placed in a warm bath every

night, the bowels be gently moved, and the patient breathe a warm and equalized temperature. In bad cases, the application of a leech or two between the nostrils may be requisite, and those medicines that determine to the surface should be had recourse to. A small blister to the nape of the neck may be found useful. The child should not be put to the breast during the stoppage of the nostrils, but the nurse's milk should be given with a spoon, or if that be not practicable, cow's or ass's milk may be substituted, giving the preference to the latter.

ON DENTITION.

DURING the period of infancy, the human body would appear to be more susceptible of morbid impressions, than at any other time, the most trifling cause sometimes giving rise to a disordered or disturbed state of the system. We generally find this susceptibility very much increased during dentition; but at the same time I must condemn the practice of some, who indiscriminately refer almost all complaints which then occur to this process. In some cases the teeth come through with so much ease, that their appearance is often only casually discovered. In weakly children, teething is frequently tedious and irregular; and in some instances, much constitutional and febrile irritation are produced.

Dr. Underwood, in my opinion, has not been sufficiently explicit in his directions for lancing the

gums. He says that the lancet should be carried down to the teeth ; and recommends in some cases, that the gum should be at once divided along a great part of one or both jaws. Although I fully agree as to the propriety of carrying the lancet down to the tooth under certain circumstances, so as to divide the membrane by which it is enveloped, I cannot say that I consider so free an application of the lancet called for ; indeed I might cite instances of gangrene and death occurring after a too free use of the lancet. When we consider the relation that exists between the connecting membranes and sacs of the second set of teeth, the progress of the latter must, in my opinion, be often interfered with.

It is no doubt sometimes necessary, during the progress of dentition, to carry the incision down as far as the investing membrane of the tooth. Cases may now and then occur, in which an inflamed state of this membrane exists, without any corresponding inflammation of the gum ; and the child may suffer great pain from this cause ; and although there is no external appearance indicative of the inflamed state of the membrane within, the part

may generally be readily detected by the child's constantly applying his finger to it.

In the operation of lancing the gums, particularly when we are desirous of making a deep incision, we should be careful to turn the edge of the lancet obliquely outwards, for by an attention to this simple precaution, we avoid interfering with the second set of teeth. The troubles of dentition, for we cannot call it a disease, generally begin about the fifth, sixth, or seventh month; but in different children this will be found to vary much.

Instances have occasionally occurred of children having been born with teeth. Haller mentions nineteen cases of the kind. I have seen but one instance; but I have occasionally met with cases in which teeth have appeared about the second or third month. Such deviations from the usual course are by no means indicative of a good constitution. I have met with two instances of children who had not cut a tooth at the age of two years: they were both strong and healthy. I have observed, that in those instances in which dentition began unusually early, the children were generally weakly, and not unfrequently of scrofulous habits.

Instances are on record of individuals who have never had teeth*.

Although the progress of the teeth is by no means marked with invariable regularity, the following will, I think, be found a tolerably correct description of the order in which they generally appear. The middle incisores of the lower jaw are the first to come through ; after an interval of a few weeks, these are followed by the corresponding incisores of the upper jaw. In the course of five or six weeks after, the lateral incisores of the lower jaw generally appear, which are succeeded shortly after by those of the upper. The small, or anterior grinders of the lower jaw appear from the twelfth to the fourteenth month, and nearly at the same time, or shortly after, those of the upper follow. From the sixteenth to the twentieth month, the cuspidati, or canini, are observed in the under jaw, while from this period to the thirtieth month, the large or posterior grinders appear.

The time at which children shed the first set, or milk teeth, or in other words the period in which

* Gardien, *Maladies des Enfants*.

the second dentition commences, varies from the sixth to the seventh year. The middle incisores of the lower jaw appear, followed by the corresponding incisores of the upper: we next perceive the lateral incisores of the lower jaw, and about the same time the anterior grinders appear. The lateral incisores of the upper jaw follow a short time after. About the ninth year, the anterior bicuspidæ are observed, and in about a year or two after, the cuspidati and middle grinders appear, while the posterior grinders, or wise teeth as they are called, vary in their appearance from the sixteenth to the twentieth or twenty-fifth year, or in some instances still later.

It has been often remarked, and I think justly, that those children whose secretion of saliva is copious, and whose bowels are more than usually relaxed, suffer the least during the time they are cutting their teeth. During the progress of dentition, it is always advisable to keep up a moderate and sufficient action on the bowels. The head should be kept cool, and I question the propriety of covering it even at night, particularly in those children of a full and plethoric habit.

It would appear that children find considerable relief from the application of slight pressure to the gums during this period ; something should therefore be allowed for this purpose. A substance that will yield to the pressure of the gum is to be preferred. I always recommend an oblong piece of Indian rubber, about two or three inches in length, which should be suspended round the neck by a piece of ribbon or tape. I decidedly object to the use of coral, as recommended by Dr. Underwood ; or indeed any substance which offers resistance to the pressure of the gums, as from its employment the parts frequently become bruised and much inflamed. I am persuaded I have sometimes seen considerable cerebral excitement, convulsions, &c. produced from this cause.

Children are generally more or less fractious and restless during the course of dentition ; it gives rise to fever, loss of sleep, obstinate constipation, and not unfrequently diarrhoea occurs. From the use of opiates during dentition, which are sometimes almost indiscriminately administered, the most serious results often accrue, particularly where the child is of a gross and irritable habit ; and though

cases occasionally occur warranting their exhibition, I believe them to be almost always contra-indicated, unless when given with the view of stopping a profuse or obstinate diarrhœa.

I have sometimes found the vessels of the head so full of blood, from difficult and painful dentition, that I have considered it necessary either to open the jugular vein, or to apply leeches behind the ears, or to the temples.

In some instances it is requisite to employ those medicines calculated to keep up the strength of the little patient, who will sometimes be completely exhausted from a painful and tedious progress of the teeth to the surface. In those cases where the gum is swollen or inflamed, and there is much heat, &c. the use of the gum lancet will often give immediate relief by lessening the tension and inflammation of the gum, although it may not hurry the approach of the tooth. When costiveness prevails, and the motions exhibit an unhealthy appearance, which they not unfrequently do, a powder composed of calomel, with rhubarb, scammony, or jalap, should be given at bed-time, which may be followed in the morning by a draught

of the infusion of senna, with one of the neutral salts. If the evacuations still continue unhealthy, small doses of calomel should be given till they assume a better appearance. It is not uncommon for a disordered state of stomach to accompany this constipated state of the bowels, which is indicated by nausea, want of appetite, and an offensive breath. In this case, an emetic of ipecacuanha may advantageously precede the purgative.

In tedious cases of dentition, children are occasionally much troubled with an ulcerated state of the gums; the parts should be now and then touched with the honey of borax, or alum in the honey of roses. The occurrence of a sympathetic and moderate diarrhœa, should be by no means checked, particularly in plethoric children, as it will be found to lessen local determinations, by lowering the action of the heart and blood vessels. Where spontaneous diarrhœa does occur, so great are the advantages derived from it, that upon its non-occurrence nature seems to indicate the necessity and propriety of producing a moderate looseness or relaxation, to the extent of three or four motions in the course of twenty-four hours.

No regular rule can be given for the diet during dentition, as it must depend entirely upon existing symptoms; in some instances a strict antiphlogistic regimen is indicated, while in others an opposite plan must be pursued. Diarrhœa and convulsions, as connected with dentition, are more fully noticed in their respective places.

CONVULSIONS.

WHEN convulsions occur during infancy, the exciting cause may generally be traced to the poor or unhealthy state of the breast milk, to the improper exhibition of narcotics, to painful or difficult dentition, crude or indigestible food, constipation, mental impressions suddenly produced by fright or surprise, irritation of the brain or its membranes, from the presence of water or fulness of blood in the vessels, which is favoured by the injurious custom of keeping the heads of infants too warm, or the occurrence of pain in any part, however distant from the brain.

Most authors agree as to the presence of worms acting occasionally as an exciting cause, but observation will not allow me to point this out as a symptom amongst children at the breast, as they are but seldom affected by them. I do not doubt, however, that this may be occasionally the cause, for

in the only two instances I have seen of worms occurring at this tender age, convulsions, which formed a prominent feature, were only relieved by their expulsion.

Many authors have endeavoured to explain the true nature and cause of convulsions, but no satisfactory theory has yet been broached, and there is still a field left for pathological research; but that the brain is always more or less affected, either primarily or subsequently, cannot, in my opinion, be doubted. It would appear that the extent and violence of convulsions are not always proportioned to the exciting cause, whence I would infer, that they are to be attributed more to an original morbid sensibility of the brain, which I believe always exists to a certain degree in those who are the subjects of convulsive attacks, than to the exciting cause, however great it may be; for in some instances, any one or more of the above-mentioned causes may exist to a great extent, without producing convulsive action, while in others the slightest cause may produce it to an alarming degree. Where this morbid sensibility seems to exist, it would appear to continue and increase from birth till the period of dentition is completed; and where

the predisposition is great, its influence does not entirely subside before the completion of the third or fourth year, or longer.

Convulsions are sometimes hereditary, and females seem the most liable to them; they generally occur during the day time. A frequent recurrence of convulsions may cause so great an excitement in the brain as to produce epilepsy (which is mostly preceded by a state of stupor or coma), phrenitis, or hydrocephalus: the latter may be generally suspected upon the occurrence of slight paralysis, which frequently precedes it.

Convulsions are sometimes classed under two heads, to which the names of tonic and clonic have been given. Under the former are included those in which the contraction is permanent, as in tetanus. This is the most alarming description of convulsions, and when it attacks children generally proves fatal in a short time. But the clonic spasm, or one on which I am now going to treat, is the most frequent, and consists in the alternate and involuntary action of the muscles. The convulsive paroxysms vary much in intensity and duration: they may be general, or may attack different parts upon each recurrence. One set of muscles alone may be the sub-

jects of them, while in some instances one side of the body only may be affected.

I have occasionally known convulsions occur periodically. I consider such cases, however mild they may be, exceedingly dangerous, as they must always be looked upon as symptomatic of disease in the head: out of six cases that have fallen under my observation, one only recovered. I could only obtain permission in one case to examine the body, and in this instance I found a considerable effusion of water in the ventricles. In the others, symptoms were so well marked, as to leave little doubt that death might be attributed to the same cause. In most instances, when disease proves fatal in children, convulsions are the precursors of death.

Upon the occurrence of a paroxysm of convulsions, the muscles of the extremities are called into a sudden and violent state of agitation; the hands are firmly closed, the thumbs being turned inwards, and it is sometimes with difficulty the hand can be opened: the eyes are open; sometimes rolling wildly about, at other times they appear permanently fixed, with dilatation of the pupils: the muscles of the chest and diaphragm become involved, and respiration is

performed irregularly or with difficulty, while those of the face are sometimes frightfully distorted.

Treatment.

If upon being called to a child labouring under convulsions, we find the face flushed, the eyes prominent, indicating cerebral excitement or congestion, blood should be abstracted by opening the jugular vein. A dose of castor oil, or calomel and jalap, should follow, to expedite the effects of which, an enema may be directed. In my opinion, this is the only case of convulsions in which we are warranted in employing the cold affusion ; and in some instances, I have certainly used it with decidedly good effects. I confess I cannot agree with Dr. Currie, who recommends it indiscriminately in all cases. Were I to speak from my own experience, I should say, that it is better adapted to children of a more advanced age, and seldom or never to those of early infancy. That the bad quality of the breast milk, which is much influenced by the mode of living, and the state of health, both bodily and mental, of the nurse, sometimes gives rise to convulsions, cannot be doubted,

and in this case, the preventive of their occurrence is obvious—a change of the nurse.

When convulsions occur during the progress of dentition, the gums should always be examined, and if they be at all swollen or inflamed, they should be freely divided. Where there is reason to believe, from the age of the child and appearance of the gum, that the tardy approach of a tooth to the surface is the exciting cause, an incision should be made sufficiently deep to divide the membrane that envelops it. I have known this simple operation act almost instantaneously in putting a stop to convulsions. The child should then be placed in a warm bath, and a brisk dose of purgative medicine given, proportioned to his age, constitution, and to the violence of the attack. Small doses of the extract of hyoscyamus, will sometimes materially assist in allaying irritation in this case.

In those cases of convulsions where we have reason to suspect a determination of blood to the head, its abstraction, either by opening the jugular vein, cupping, or the application of leeches behind the ears or to the temples, must be by no means omitted. Although it may not always be deemed

actually necessary to apply cold evaporating lotions to the head after the loss of blood, I consider it a precautionary measure that should not be neglected.

A constipated state of the bowels is by no means an uncommon cause. When this is ascertained to be the case, the child should be immediately placed in a warm bath; and as our object must be to operate quickly and effectually on the bowels, a dose of castor oil or calomel and scammony should be given, and repeated every two or three hours if necessary, the speedy operation of which may be promoted by a laxative clyster. If flatulence be present, a little assafoetida may be advantageously added, while a drop of one of the essential oils should be combined with the purgative.

Convulsions which are produced by emotions of the mind are considered the most dangerous. In such cases the warm bath should be employed, and ammonia, or the compound spirits of ammonia in camphor mixture given. A camphorated clyster may be used with advantage.

Respecting the effects of opiates on children, I can say little more than that in far the greater number of cases they are contra-indicated, and consequently prejudicial: however, if they are at all applicable, it is where the exciting cause

is abdominal pain; but in whatever case we administer opiates, they ought to be given with extreme caution. In those cases where sedatives are indicated, the tincture or extract of hyoscyamus will be found the most safe and efficacious. When the presence of acidity or any crude substance in the stomach acts as an excitant, it should be removed by a gentle emetic. The warm bath is here indicated; a purgative should be exhibited, and a laxative clyster with assafoetida thrown up.

In those cases which precede the appearance of scarlatina, rubeola, or any other exanthema, those means should be resorted to, which are the most likely to determine to the surface; and where a retrocession of any of these takes place, the indications are the same. The warm bath will be found the most useful remedy in either case, while the exhibition of a laxative dose of medicine will materially assist in producing the appearance of the eruption.

I cannot close this subject without again advert-
ing to the great utility of purgatives in convulsions, as in neglecting their exhibition, our other remedies will often prove nugatory. Respecting the effects of blisters, I strongly object to their use. But

should their application be deemed necessary, I would recommend their not being applied, under any circumstances, to the head, particularly where cerebral excitement exists to any extent, as I am persuaded their application will mostly be found to increase it; but they may be applied with greater safety to the neck, or calves of the legs. Where we are desirous of producing counter irritation, mustard cataplasms to the extremities, will often prove an excellent substitute. The temperature of the bath, which is so useful in convulsions, should vary from ninety-two to ninety-five degrees of Fahrenheit.

INWARD FITS.

During the first five or six weeks of a child's life, slight spasmodic action not unfrequently occurs, which has been described by the name of inward fits or convulsions. The sleep is very light, the slightest noise disturbing him, and he awakes crying, and apparently much agitated. During this imperfect sleep, the eye-lids are only partially closed, and from the eye-balls being turned upwards, the whites only are visible. The breathing is soft, and sometimes almost inaudible; the muscles

of the nose and mouth are slightly affected, giving the appearance of a smile, or rather of an approaching laugh. The face will be observed sometimes to change frequently from a pale to a livid hue, more particularly under the eyes, and round the mouth. These inward fits, as they are termed, may be almost always attributed to the presence of flatus in the stomach and bowels, the expulsion of which, when taking place, either naturally or by the assistance of medicine, always gives relief. A few drops of the foetid spirits of ammonia, in a little aniseed or dill water, will be found to assist in expelling the wind. A tea-spoonful of castor oil may follow. It is always of consequence to attend to this complaint, for however slight symptoms may be in the first instance, they may, if neglected, lay the foundation of, or terminate in convulsions of a more serious character. When they occur before the meconium is entirely evacuated (the presence of which may occasionally act as an exciting cause), we should promote the action of the bowels by the exhibition of the *ol. ricini*.

For more detailed observations on this disease, the reader may consult with advantage a modern writer, "North on Convulsions."

ST. VITUS'S DANCE.

It is now one hundred and forty years since Sydenham gave a correct account of this disease, to which little had been added till the publication of Dr. James Hamilton some years back, on purgative medicines ; in which we find a most excellent description of the symptoms and treatment of this singular affection. Children from the age of seven or eight years, to that of fifteen or sixteen, are mostly the subjects of it. It however occasionally attacks them at a much later period of life. I have met with a well-marked case occurring in a young man above twenty years of age. Previous to its attack, the progress of which is generally gradual, the child may often be observed to be heavy and incapable of exertion ; in most cases the lower part of the abdomen will feel hard and distended, but in others it will be in a soft and flabby state. There generally exists a constipated and sluggish state of

the bowels, the breath will be fœtid, and the evacuations often dark and highly offensive. The appetite varies, in some instances being very great, while in others it entirely fails.

Those whose constitutional powers are impaired by confinement, who lead a sedentary life, and whose diet is insufficient or unwholesome, would appear to be the most predisposed to it. From observation I should say, that females more particularly are the subjects of it. Slight convulsive and involuntary motions of the muscles of the face are observed; those of the head, jaw, trunk, and extremities, become at different times similarly convulsed, the patient being fully aware of their approach and presence, though unable to repress them. One of the legs will appear affected by the patient's dragging it after him, accompanied with a starting convulsive motion, which has a ludicrous effect; the arm of the same side, or both arms, are similarly affected, he is unable to convey any thing to his mouth, and cannot remain in a quiescent posture. There is not always a cessation during sleep, the muscles of the limbs often continuing their convulsive motions, so as to interfere materially with the necessary rest. There occasionally exists a great difficulty in swallowing, and articulation becomes

imperfect, and sometimes impossible. As the disease advances, the face becomes pale, there is a general expression of languor, and a dull or heavy appearance of the eyes, with a vacant and silly expression, while the intellectual faculties are occasionally more or less affected ; but in some instances they are by no means impaired.

Although this disease is not attended by danger, it sometimes proves very tedious, and in many cases wears itself out without the aid of medicines. There have been cases recorded, which existed through a long life, without impairing either body or mind. Occasionally relapses take place, after the disease has been apparently conquered.

In two obstinate instances which fell under my observation a few years since, I found chorea resist the effects of the purgatives and other remedies which were employed ; but in each case, on the appearance of the catamenia, the symptoms quickly subsided. Chorea would seem to be greatly influenced by the approach of puberty in both sexes, as it not unfrequently either comes on immediately preceding or subsequent to that period.

Treatment.

As the predisposing cause of chorea may almost always be considered an irritable state of the nervous system, produced by constipation and functional derangement of the stomach and bowels, the plan to be pursued must be to re-establish their healthy action. To attain this end, nothing contributes more than the proper and well-regulated exhibition of purgatives. In the early stages of the disease, we should begin by producing two or three copious motions; for which purpose a combination of calomel with jalap and aloes, will be found efficacious; after which it will be necessary to keep up a regular action on the intestinal canal, by the administration of smaller doses of purgatives. In a more advanced stage, or in other words, where the disease seems permanently established, Dr. Hamilton recommends more powerful purgatives than in the preceding, the action of which must be kept up by frequent repetition.

During the exhibition of purgatives, I consider it essentially necessary that tonics should be likewise given, to assist in restoring tone to the constitution generally. Among the most efficacious, will

be found the decoction of bark, or the infusion of gentian with a few drops of vitriolic acid, the compound decoction of aloes with the infusion of columba, or the sulphate of quinine in infusion of roses, or cascarilla. The cold bath will be found of great use ; and sea bathing, where we are consulted in an advanced stage of the disease, should be recommended. A pure and healthy air, with moderate daily exercise, will likewise contribute very much to the cure ; and I need not add that strict attention should be paid to the regimen, which should be nutritious and easy of digestion. This will be generally found a successful plan of treatment, and if persevered in, will in many cases eradicate the disease. Preparations of steel have been highly extolled as tonics ; but I have often found them interfere with and counteract the effects of the purgatives, and therefore cannot indiscriminately recommend them ; but where these effects are not produced, they may prove highly efficacious.

In cases in which the presence of worms is supposed to be the exciting cause, the oil of turpentine may be exhibited. Various other remedies have been recommended in this disease ; among others, we

may mention the nitrate of silver, and the arsenical solution, which in obstinate cases have certainly been used with decidedly good effects; musk, camphor, ammoniated copper, and the oxyde of zinc, have had their advocates; and I have no doubt that in their turns they may have been used with advantage; but in a work of this nature it is unnecessary to enter into their peculiar merits.

Whatever the means may be that have been employed, it will always be necessary to continue their use for some time after the entire cessation of the symptoms.

HYDROCEPHALUS, OR WATER IN THE HEAD.

CHILDREN are particularly liable to this complaint, and those of a scrofulous diathesis more so than others. I have occasionally observed them, before the accession of hydrocephalic symptoms, labour under extreme debility and dejectedness, without any apparent cause.

For the sake of perspicuity, I shall divide this affection into two distinct heads. The first, or that of irritation or excitement. The second, that of compression. The former is characterized by violent pain in the head, which is increased by a strong light or noise ; the patient constantly puts his hands to his head, screaming and moaning. Redness of the cheeks and conjunctiva may be observed ; the sensibility of the retina is increased. The pulse is quick and irregular ; but not unfrequently so regular as not to be indicative of a dis-

turbed circulation. Fever is present, sometimes trifling, but at other times it runs high. Nausea takes place, and the stomach may be found in such an irritable state as to reject every thing that passes into it. The tongue is often furred, and when this is the case, we find the motions, as we might a priori expect, unhealthy and exhaling an offensive odour. Sometimes the tongue will be found quite clean, the evacuations then generally appear healthy. Urine passes in small quantities and frequently. The symptoms that next follow, and which mark the second period, or that of compression, when we generally suppose effusion to have taken place, are most obstinate costiveness, grinding of the teeth, convulsive motions of the muscles of the face, followed by general convulsions, hemiplegia, with defective vision, or sometimes a total blindness. In this state of things, a strong convulsion will not unfrequently end the patient's sufferings. The convulsive paroxysms are generally most severe and violent during the night.

There is no disease in which the symptoms are more irregular in showing themselves. I have known the most violent symptoms disappear in an hour or two, the patient has appeared quite well,

and suddenly they have returned with equal if not increased violence.

This disease generally runs its course between the second and sixth week. I have remarked that it terminates fatally sooner where the loss of sight is complete. Indeed where this occurs early in the disease, the death of the child will generally take place in a week or ten days, or sometimes in a much shorter space of time.

I have seen two cases, both subjects being under three years of age, in which all the symptoms of effusion were present, so much so, as scarcely to leave a doubt as to the cause of death; and in which the brain and ventricles were found perfectly free from any appearance of water. The first was a decided instance of hypertrophy of the brain, so well described by that distinguished pathologist Laennec, and to which I shall hereafter more particularly allude. The second did not exhibit a single diseased or disordered appearance in the brain or any other part, with the exception of the mesenteric glands, which were larger than usual, and exhibited traces of scrofulous disease. The convolutions in the first case had nearly disappeared,

which I must say made me feel more certain of finding water within.

I am persuaded, that in no stage of this complaint can we obtain any certain data from the state of the pulse, although Whytt has divided this disease into three stages, and speaks of the successive appearance of a pulse quick and irregular in the first stage, followed by a slow and irregular pulsation; in the second, sometimes slower than in health; in the third, characterized by regularity and great quickness. Now this, I must confess, does not at all agree with my observations, as the pulse in many cases varies from time to time, when all the other symptoms remain unaltered. It appears from his own statement, that his practice was not at all successful. The above author seems to look upon the disease as one of decided debility.

Although I have given symptoms with apparent precision, it must not be supposed that the same train always exists; on the contrary, some of the most dangerous cases are occasionally attended by a small proportion of those enumerated. That the primary cause, in the majority of cases, is in the brain, I have little doubt. I have repeatedly

seen the symptoms, as it were, counterfeited in the most perfect degree, where it has been afterwards proved, that a disordered state of one or more of the abdominal viscera had been the exciting cause. An inactive state of the liver will sometimes produce this chain of symptoms ; upon applying pressure to the region of that viscus, we may often at once detect the cause, by the pain produced, and by finding that organ more prominent than usual. The appearance of the evacuations will likewise assist in our diagnostic. The presence of worms in the stomach or intestinal canal will sometimes act as an exciting cause ; and this brings to my mind a remarkable case which occurred to me some time since, when upon the expulsion of an immense number of worms, an almost instantaneous cessation of symptoms took place. This case illustrates in a striking degree the sympathy that exists between the brain and intestinal canal. The subject was a child about two years old. As far as my experience goes, I should say that worms seldom act as an exciting cause of head symptoms under that age. Indeed I know no active disease of the thoracic or abdominal viscera, with which the brain may not

sympathize, and produce apparent or real symptoms of acute hydrocephalus.

In some cases, I have distinctly traced the cause of the disease to a disordered state of the digestive organs. To these causes may be added the feverish and irritable symptoms often accompanying dentition, and, in fact, any of the more important disorders of the stomach and bowels, inflammation or ulceration for instance. I have known the sudden disappearance of the eruption in measles produce the disease in question. The stoppage of habitual evacuations is said sometimes to be a cause. External violence will occasionally produce this disease, but an instance of the kind has never fallen under my observation. I need not add that all the diseases peculiar or incidental to the brain may act as an exciting cause.

The appearances that are to be noticed after death, are almost as variable as the symptoms previous to that event. We sometimes find water effused on the surface of the brain. The substance of that organ is occasionally of a very firm and resisting consistence. When this state exists we not uncommonly find a considerable quantity of serum in the

ventricles. At other times the brain is soft and flabby, and when this is the case there is generally a considerable emaciation of the body. Water is often discovered between the arachnoid and pia mater. According to M. Laennec, granulations of a tuberculous nature are sometimes to be observed. The veins of the membranes, both external and where they line the cavities of the brain, are sometimes found injected with blood. Tumours of various descriptions are now and then met with, and the membranes are occasionally found thickened.

Dropsy of the spinal marrow and its membranes is said to have existed with this disease, but this complication I believe to be of rare occurrence. Upon cutting into the ventricles, we find serum more or less in quantity. Now and then one ventricle only will be found to contain fluid. Sir E. Home mentions a case, where an accumulation had taken place between the laminæ of the septum lucidum, or fifth ventricle. I recollect once seeing in a subject brought into the dissecting room, a large collection of water (certainly from eight to nine ounces) in one ventricle only. In this case the plexus choroïdes was thoroughly injected with blood. The fluid will sometimes be found only at the base of

the brain. In respect to the quantity of fluid effused, I should say that it mostly varies from one ounce and a half to seven or eight ounces: it is generally quite clear and transparent, but occasionally of a dingy yellow appearance, and nearly analogous to the serum found in other cavities lined by serous membranes. Two cases are referred to, in the "Dictionnaire des Sciences Médicales," where no water was found, but the substance of the brain was as it were infiltrated with fluid. I have in two instances known all the acute symptoms to exist, where after death I did not find a single appearance in the brain or any other part to account for death.

Treatment.

For the cure of this complaint our two grand indications are, to lessen the increased action or irritation, and when water is unfortunately formed, to endeavour to produce its absorption.

It would be unnecessary here to enumerate again the symptoms that mark the acute form. I shall take it for granted they exist.

We should begin by abstracting blood from the jugular vein, with a view of lessening the conges-

tion, and thereby diminishing the increased action of the vessels. If the child be very young, leeches may be applied, or cupping may be employed. I prefer bleeding by the lancet. I have no doubt we often determine between life and death by taking away blood quickly and effectually. Frequently the time lost by taking blood by means of cupping or leeches, might and does make all the difference to the patient. In those cases, I have frequently observed the blood exhibit the buffy coat, and in one instance, the same appearance was to be seen after cupping.

The warm bath will be found a useful auxiliary. The hair must be entirely shaven off the head, and pounded ice applied in a bladder. Cold spirituous lotions with æther should be had recourse to. If the symptoms be not decidedly relieved, we must apply a large blister to the head, from the application of which, in conjunction with other remedies, I have seen the most beneficial effects. The blister should be allowed to remain on for a couple of days, evacuating the fluid produced by it, but without removing it. In this way we apply a perpetual blister. When taken off, if the symptoms are not mitigated, another may be applied : but any way,

as a precautionary measure, it is advisable to keep up a discharge for a few days, by means of savine cerate. I have never known sloughing take place from the application of a blister to a child's head, though it is not an uncommon occurrence when applied to any other part of the body. I have occasionally applied a plaster of tartar emetic, with equally good effects.

Drastic purges in considerable doses, combined with calomel, should be exhibited in the first instance. Should the stomach be in so irritable a state as to reject the medicine, which is often the case, a purgative enema should be thrown up. The injection I generally use is composed of aloes and common gruel; it will in most cases act speedily and copiously. This form of clyster I have found of singular service. Having cleared out the stomach and bowels, calomel should be given at stated intervals, so as to produce a slight affection of the gums, which is sometimes difficult to accomplish in children; but by rubbing in mercurial ointment at the same time, to which a little camphor is added, we may often effect our purpose.

That mercury acts as an excitant of the lymphatic system, is doubted by none; it should therefore be

given as soon as the symptoms of irritation show themselves, for I believe serum begins to be effused in some cases as soon, or very soon after this irritation commences, although symptoms of pressure may not at the time be present. Mercury appears to me, under these circumstances, not only to rouse the absorbents into action, but to assist in allaying irritation. I am well aware of the prejudice which exists in the minds of many against the use of mercury in any form, not only in the treatment of the diseases of children, but also in that of adults. Highly as I respect some of their opinions, in this one I must entirely differ, as I have found it a most invaluable remedy.

Diuretics or preparations of squill and digitalis combined, may be used with advantage; the effects of the latter drug should be watched very carefully, as I have known a small dose in an adult produce an almost total cessation of the heart's action. Dr. Meriman relates a case, the progress of which was decidedly put a stop to by the *tinctura lyttæ*: strangury was produced, upon the immediate occurrence of which cerebral symptoms began to decline, and the patient ultimately recovered. In France, the vapour bath is sometimes used, while intense cold is applied to the head of the patient at the same

time. A seton has been occasionally recommended. The moxa has likewise been employed ; and Mr. Burns recommends a discharge to be kept up by means of an issue for some time after recovery. Having never witnessed the employment of the latter remedies, I cannot of course say any thing respecting their efficacy.

I should advise, whenever ambiguous symptoms appear, with quick pulse, vomiting, &c., to have immediate recourse to purging, and to the antiphlogistic regimen, should the child not be at the breast. Such a plan would at all events be applicable to the cure of those disorders likely to counterfeit the disease.

I may here mention, that I have at this moment a child between five and six months old, who is recovering after effusion had taken place : hemiplegia had existed for four days.

MOST ACUTE HYDROCEPHALUS.

There is one form of acute hydrocephalus that sometimes attacks children, and which has not been particularly noticed, as far as I can learn, by any

author, except Mr. Burns and Dr. Monro. The latter has given a most correct and accurate account of it, in his excellent work on the morbid anatomy of the brain. The great peculiarities and differences which distinguish it from that form of hydrocephalus already described, are, that it comes on suddenly without a single preparatory symptom, such as pain in the head, heaviness, nausea, sickness, neither is the sensibility of the retina greater than usual. The child will be found to awake suddenly from his sleep, in a state of apparent fright, as if from a dream; symptoms of high fever are present, the pulse varies from 150 to 200 in a minute, and a great degree of thirst generally exists; but the most peculiar symptom is a croaking and hoarse sound of the voice, resembling in a very striking manner the sound of croup. This sound will sometimes be absent for some time, and then return with equal or increased violence.

I should say that children of a strong or gross habit are most frequently the subjects of this form of the complaint. I do not recollect having ever seen more than two weakly children attacked by it. I have never seen a child above two years old the subject of it, and I believe it to be quite peculiar to

children, and even then it occurs more frequently during dentition. Mr. Burns assigns as a cause, an affection of the fifth and eighth pair of nerves, producing a paralytic state of the muscles of the glottis.

The appearances to be observed after death, are the total absence of the coat of coagulable lymph, which is found to line the larynx and trachea in croup ; nor is there any appearance to lead us to suppose that inflammatory action had taken place, as in fact, the whole of the respiratory organs will generally be found healthy. The abdominal and thoracic viscera are also mostly found free from disease. The veins of the dura mater are often found distended with blood, and there is always water more or less in quantity, either on the surface or in the ventricles of the brain.

Treatment.

This is a case requiring the most prompt measures. The patient should be placed in a warm bath, and while in that situation, blood should be taken from the head, so as to produce approaching syncope, the good effects of which I have myself witnessed. They are soon made evident by the partial,

or sometimes nearly total cessation of the affection of the throat. A brisk dose of calomel combined with jalap or scammony is here indicated, after the operation of which, the mouth should be slightly affected by mercury; a blister may be applied to the nape of the neck with advantage, and if necessary, the remedies pointed out for acute hydrocephalus should be adopted.

CHRONIC HYDROCEPHALUS, OR WATER IN THE HEAD.

The water in this form of the disease accumulates slowly, and without any apparent cause. It sometimes exists at birth, but in the majority of cases it begins to form within the first six weeks of the child's life. It is likewise met at a more advanced age, and even the adult may be the subject of it. It is said by some authors to depend on a local or general want of tone in the lymphatics; or may it not be the consequence of sub-acute inflammation or irritation? The quantity of water is sometimes very great, and the enormous size the head attains is in some instances remarkable. Hildanus mentions a case in which the head of a child measured an ell in circumference, and contained water in proportion.

The enlargement is occasionally gradual, but in some cases extremely rapid. Instances now and then occur, in which the head is so large before birth, from the accumulation of water within, that it may be found necessary to puncture or open the head to expedite delivery.

I once desired to see a patient, where paralysis of the left side and convulsions had come on suddenly, although she had before only complained of slight heaviness and pain in the head. Death followed almost instantaneously. In this case, I found a cyst in the middle lobe of the left hemisphere of the brain, which contained nearly four ounces of yellowish serum, and about an ounce of fluid was found in the ventricles. Occasional symptoms were said to have existed for four or five years previously.

The memory is not always retentive, but considering the nature of the disease, it is extraordinary how little the intellectual faculties are disturbed. The organs of digestion are generally in a sluggish state, and the lower extremities are remarkably cold.

I know an instance at this moment of a young lady about 25 years of age, labouring under chronic hydrocephalus. She occasionally complains

of intense pain under the right parietal bone: she is however sometimes free from symptoms for months together. About two years since, she had a slight attack of paralysis of the right side. Her feet are generally intensely cold, and her bowels remarkably torpid.

Sufficient might be said to fill a volume, were I to enter into the various forms the head assumes, the many causes to which the disease has been referred, and the numerous measures both medical and surgical which have been from time to time recommended for its alleviation or cure. But in a work like the present, intended to be purely practical, it would be superfluous in me to enter into details, which can lead to no useful results.

Treatment.

I have seen a few cases in which the internal exhibition of mercury appeared to do good, when the gums became affected, and ptyalism was produced, mercurial ointment being at the same time freely rubbed in.

My late respected friend and master Mr. Wilson relates four cases in one family, in which the symptoms were entirely arrested by the application of

mercurial ointment. *Digitalis*, combined with tonics, I have occasionally employed with advantage. Saline diuretics are recommended by many, and sometimes certainly prove more beneficial than those of the vegetable class. I need not premise the necessity of attending strictly to the state of the stomach and bowels. The application of a blister may be attended with good effects. Exercise in the open air, when it can with propriety be had recourse to, may act as an auxiliary. Spirituous lotions are employed by many, and are applicable if there be pain or heat in the head. Sometimes it is necessary to support the system by tonics and a generous diet.

Boerhaave recommended the application of a bandage to the head, with the exhibition of purgatives at the same time. Riverius alludes to a case of water in the head, which was cured by a surgeon in Montpellier, by the application of a bandage removed every day. I have never seen pressure applied myself, nor should I recommend it, as the cases which have been published do not appear sufficiently satisfactory to warrant a trial. The water has been advised to be drawn off by the operation of tapping; and in the ninth volume of the *Medico-Chirurgical Transactions*, a case is related

in which the operation was performed with apparent relief. Another case is mentioned in the Edinburgh Medical and Surgical Journal. I have alluded to this mode of treatment, as it has been occasionally tried, but I very much doubt whether it has ever effected a radical cure.

By varying the treatment according to circumstances, I believe the disease may sometimes be removed, if the accumulation of fluid be not very great; however, we are never warranted in giving a decided opinion as to the result, for I fear this formidable disease will almost always baffle our skill.

HYPERTROPHY OR ENLARGEMENT OF THE BRAIN.

The late indefatigable and deservedly distinguished Laennec, was the first I believe who noticed particularly or described the enlargement of the volume of the cerebral mass. Morgagni notices it in a cursory way; and upon referring to Baillie's Morbid Anatomy, it is not mentioned. According to Laennec, it is not met with in adults, but among children it is often to be observed.

Upon exposing the brain, we are struck by the

flattened or total disappearance of the convolutions of that organ, the substance of which will generally be found of a remarkably firm consistence, and water is seldom or never discovered in the ventricles. The symptoms commonly resemble those of acute hydrocephalus; however, in some instances they are so insidious as to appear more like hydrocephalus of a chronic nature.

There is still a field open for pathological research, as the cause of this affection at present remains to be explained. Appearances do not lead us to suppose that any thing like increased action of the vessels of the brain had taken place before death.

CATARRH, OR COMMON COLD. PLEURITIS, OR PLEURISY.

WHEN a child is observed to labour under febrile action, indicated by a quick pulse, restlessness, an increased secretion from the eyes and nose, flushed countenance, accompanied with cough, and probably with a short and slightly impeded respiration, he is said to labour under a common cold or catarrh. In such cases, the use of the warm bath at night, with a laxative, will generally be found sufficient, while a tea-spoonful of a mixture composed of equal parts of the syrup of tolu and the mucilage of gum arabic, with a few drops of ipecacuanha wine, should be given occasionally. This combination though simple will generally tranquillize and ease the cough and irritation. Care should be taken not to expose the child to the risk of catching fresh cold, for by so doing, there may be danger of exciting pneumonic inflammation.

However, where the symptoms run high, and the presence of inflammation of the pleura is suspected, from the increased difficulty of breathing, the accelerated action of the heart, indicated by a quick pulse, a hot dry skin, with increased cough and pain, the latter being augmented by the child's crying, or by change of position,—promptitude on the part of the medical attendant is indispensable; for should we be dilatory, we shall soon find our little patient breathe with the utmost difficulty, the cough threatening suffocation. The urgency and fatal tendency of the case, if neglected, will be still further marked by a languid and intermittent state of the pulse, coldness of the extremities, while a rattling noise is heard in the throat, from the presence of an increased secretion of phlegm or mucus, and an inability to expectorate it.

In the treatment of pleuritis, our first step should be to lessen the action of the heart and arteries; and as this effect is most readily produced by abstracting blood, we should not hesitate in having recourse to it. If the child be very young, the application of leeches or cupping should be the means employed. In older children, it will be

more advisable to open a vein in the arm. The bleeding should be followed by a brisk operation on the bowels. After the abstraction of blood I have found material benefit from the exhibition of small doses of the infusion of digitalis, with antimonial or ipecacuanha wine, and sweet spirit of nitre, in almond emulsion. To the decided influence digitalis exerts in lessening arterial action, and the nauseating and expectorant properties of antimony and ipecacuanha, do I attribute the good effects of this combination. The use of the warm bath and the early and judicious administration of active purgatives will be found particularly advantageous, and should therefore not be neglected. Should the loss of blood not have had the desired effect, by sufficiently lessening the urgency of the symptoms, a repetition of the operation is called for without hesitation. The judgment of the practitioner must decide as to the further mode of depletion, whether local or general. In a repetition of blood-letting, we must of course be guided by the quantity taken and the effect produced in the first instance, as well as by the age and constitution of the child.

I am aware that many practitioners recommend

the application of blisters in any stage of the disease. I never employ them myself till I find I have succeeded in subduing the increased action, after which a blister may be applied to the chest with decided advantage, taking the precaution to remove it when an inflamed surface is produced. To those who object to their use, an excellent substitute may be found in the application of a plaster of tartar emetic, or in form of ointment, in the proportion of a drachm to half an ounce of the simple ointment, which should be rubbed in three or four times a day: this application should be discontinued when small pimples appear on the chest. Throughout the course of this disease, an antiphlogistic regimen should be strictly pursued: if the child be at the breast, he should be confined to that alone.

CROUP.

THIS disease is of a highly alarming character ; and what renders it more so, is the circumstance of our not having a single fact to point out with certainty the mischief we have to combat, till the disease has made a certain progress. It is almost peculiar to childhood, adults being seldom the subjects of it : children, from the age of six months to six or eight years, are the most liable to it. Some authors are of opinion that it never attacks children at the breast, but this is not the case, as I have known it attack very young infants. It is no doubt sometimes epidemic, particularly in cold marshy situations, and it would appear more so when exposed to a northerly wind. Some writers consider it contagious, but this I am inclined to doubt.

It is generally produced by cold, and almost always appears during the spring or winter months.

Those of a sanguine temperament are decidedly the most liable to it, but it sometimes attacks the poorest and most weakly subjects. I do not think I exaggerate when I assert that two-thirds of those who are attacked by this disease, become its victims. I believe the fatality attending the complaint, depends in a great measure on the period at which an active and judicious treatment is adopted; and unfortunately the medical attendant is seldom called in till diseased action has made such progress as to render the efforts of art unavailing.

I shall not here enter into the different species and stages under which writers have at various times classed this disease, but proceed at once to describe it. It will be found to begin in most cases with symptoms of common catarrh, *viz.* alternate attacks of heat and cold, uneasiness, a whitish tongue, restlessness, an increased secretion of the mucous membrane lining the nose, and loss of appetite accompanied by a cough, sometimes at the commencement hoarse and shrill: the pulse is rather quick; the child's sleep is but little disturbed at first; and in this way, the complaint makes an insidious progress. This state of things may exist, and frequently does for two or three days, or longer,

before the practitioner is sent for, which generally happens at night. He finds that his little patient has awoke in a state of great anxiety and fright, with considerable difficulty of breathing, flushed face, hot state of skin, complains of pain and tightness in the throat or larynx; but the most decided and singular symptom, and that which clears up all doubt as to the true nature of the disease, is the peculiar sound of the cough. It seems to come on spasmodically, and will be found to resemble, from the noise that is produced in the larynx and trachea, the crowing of a young cock, or perhaps more aptly, the sound produced by blowing through a contracted metal tube. This peculiar noise, when once heard, can never be mistaken. The child, from the exhaustion generally produced by this attack, will probably lose the most prominent symptoms, the difficulty of breathing, and the sonorous and croupy sound of voice excepted; and which I may here remark, now continues more or less during the subsequent course of the disease. In consequence of this interval of comparative rest, the child drops off to sleep, but sooner or later he suddenly starts up again with all the symptoms of strangulation. The hand is incessantly carried to

the windpipe; the respiration is performed with increased difficulty, the pupils become dilated, the eyes are expressive of great anxiety, the pulse quick and full, slight convulsions may occur, and there is great difficulty in expectoration. An abatement of symptoms again takes place, but is found to be but of short duration; they now become remarkably prominent, and the paroxysms return frequently, and even during the short intermissions, the distressing symptoms of the disease are great.

From this time, we may generally suppose that the false membrane is partially or totally formed. The pulse will be found still frequent, but wiry; the paroxysms are now brought on by the slightest cause; an attempt to swallow or to move for instance, will bring on cough and spasm. I consider there is always more or less spasmodic action during the course of this complaint, produced no doubt by the presence of the irritable secretion in the windpipe. Deglutition will sometimes at this stage of the disease be performed with great difficulty. The lips become alternately red and livid; sickness will most likely accompany the effort of coughing, and there may be observed in the mucus brought up, shreds or pieces of a mem-

branous appearance ; immediately after this effort, the perspiration will be often seen to roll down the patient's cheeks. When the disease has arrived thus far, it seems to have exhausted the patient so much as to leave little or no hopes of recovery.

The paroxysms no sooner disappear than they return again ; articulation is entirely or nearly impossible, the patient may be said merely to breathe, this action appearing to be carried on by the diaphragm alone, the other muscles subservient to respiration not acting ; the lower extremities become cold, hiccups take place, the countenance assumes a cadaverous appearance, the eyes are heavy and inexpressive, and as it were sunk in the head ; a cold clammy perspiration will be observed. There is now every indication of approaching death, the pulse intermits and is scarcely to be felt : the cough and hoarseness seem quite gone. However, even under all these circumstances, nature may attempt to rally, a violent convulsive fit of coughing may take place, and in this effort the patient's sufferings may terminate, though very generally death occurs without a struggle. I have endeavoured in the above to give the pathognomonic symptoms of

croup, as they almost always occur. It has fallen to my lot to witness those symptoms not unfrequently; and I have no hesitation in saying, that in many cases, success will be the result of the mode of treatment I shall presently recommend, if adopted in time with sufficient activity and promptitude; for I consider it a disease in which life and death are almost at the disposal of the practitioner, provided he be called in time; but of course untoward circumstances will sometimes occur that may render his exertions nugatory.

The most alarming cases will sometimes yield in three or four days, though in others the symptoms may exist for a week or fortnight, but seldom longer.

Treatment.

As I consider this disease to be purely inflammatory, the first step to be taken is to abstract blood, which should be done by taking from the jugular vein a quantity of blood, proportioned to the age of the patient and the urgency of the symptoms. I prefer opening this vein, as I think it gives more immediate relief, from its proximity to the seat of the disordered or diseased parts. Sufficient should

be taken to produce a sensible action on the heart, and soon after reaction has taken place, an emetic of ipecacuanha should be administered, sufficiently strong to produce full vomiting. A dose of calomel should follow, the operation of which may be expedited by an injection of some drastic purgative. This is the plan I invariably pursue, when I meet with a case of decided or even doubtful croup, and in many cases have found my exertions successful.

So much do I dread this disease, that whenever I meet with a child labouring under cold, if it be accompanied by a dry hoarse cough, with pain and difficulty of breathing, I very generally have recourse to the measures I have just mentioned.

It may appear that I am producing unnecessary alarm ; but however this is not the case, as those who have seen much of the complaint can testify. Even should it not be a real case of croup, the symptoms would lead us to suppose that inflammatory action was going on, the treatment would therefore be applicable in either event. Sometimes the relief produced by the sudden evacuation of blood is almost instantaneous, and with the assist-

ance of the other remedies, will subdue the dangerous symptoms in a short time.

By the time the above treatment has been carried into execution, if a manifest improvement has not taken place, so quickly does the disease run its course, that we may expect the formative process to have commenced, or in other words that the exudation of coagulable lymph is about to take place, if it have not already done so. Supposing the disease to be unfortunately so far advanced, leeches should be applied to the larynx, or cupping on the nape of the neck: but should the inflammation seem to go on without any abatement, we should not hesitate in again abstracting blood; of course bearing in mind that young subjects do not bear the loss of blood as well as those advanced in years. A combination of calomel and ipecacuanha should then be given every two hours, the former with a view of exciting salivation, the latter for the purpose of producing nausea and a free expectoration. In children above three or four years of age, it has appeared to me the better plan to substitute small doses of tartar emetic for the ipecacuanha; but in very young children I have known the smallest dose

of tartar emetic produce vomiting of an alarming description. I have seen the neck encompassed with a blister, or a plaster of tartar emetic, which has proved serviceable. Mercurial friction should be had recourse to, while the calomel and ipecacuanha are administered internally. At this period, an emetic may be given with advantage, as it will sometimes cause the expulsion of fragments of the false membrane. I have known the warm bath of the greatest service, especially when employed before the emetic in this stage of the complaint; it will be often found to increase the good effects of expectorants, and tend very much to allay the inordinate irritation, particularly when it produces an abundant perspiration. I must here beg to speak decidedly against the indiscriminate use of emetics, when given at a late period in this disease, as I think they only tend to increase that state of exhaustion, which must necessarily exist, if the remedies already suggested have not had the desired effect. Although the chances are then hopeless, and death must almost inevitably take place in a short time, we are still not warranted in leaving any thing undone while life remains; we may therefore apply mustard sinapisms to the feet, or

blisters to the calves of the legs ; æther may be inhaled, and assafœtida may be given, and likewise exhibited by means of an enema.

Having failed in our endeavours to prevent the formation of the false lining, and having been equally unsuccessful in our attempts to remove it when formed, with the view of preventing the impending suffocation, there is one resource left, which is tracheotomy. I must confess I have no confidence in this operation ; but if the chances be ever so remote, it should be had recourse to as an “ultimum remedium.”

Usual Appearances after Death.

The veins of the neck will be often found to have assumed a varicose state. The vessels of the brain and its membranes will sometimes be found to contain more blood than usual, and a little water may be discovered in the ventricles. The abdominal viscera frequently appear healthy. The substance of the lungs will be mostly found free from disease, but serum will very generally be discovered in the chest. We always find sufficient to account for the cause of death in the larynx or trachea, unless in those cases where that event has taken place in a

very short time. The inner surface of the respiratory tube is found lined partially, sometimes generally, with a coat of fibrin or coagulable lymph, now and then nearly filling up the passage, mostly commencing a little below the larynx, and in some cases extending to the bronchia. It is readily separated from the mucous membrane, the surface of which will be found to exhibit a reddish appearance, which is sometimes only partial, but always exists more or less. A stringy semi-purulent matter, which varies in colour and consistence, will likewise be observed.

There is another variety of this disease, which may be characterized by the suddenness of the attack, the violence of its symptoms, and its speedy fatal termination, if not treated in the quickest and most decided manner. It comes on without the slightest catarrhal affection: the leading symptoms are a most difficult and laboured breathing, accompanied by a decided croupy noise and cough, a hard and quick pulse, great fulness of the head, flushed countenance, the eyes bloodshot and starting as it were from the sockets, the greatest state of

anxiety prevails, and instant death from apparent suffocation is momentarily threatened. A case of this description occurred to me some time since, the relation of which will render it unnecessary for me to say much upon the subject. The child was about six years of age. She had had a similar attack about a year before, but it would appear not to have been of so violent a nature. In this case I immediately opened the external jugular vein, and exhibited a powerful dose of calomel and jalap; at the same time a drastic injection was directed. The good effects produced by the bleeding were immediately evident, as far as the head was concerned, but the mischief in the throat was very little, if at all relieved. The medicine operated speedily without any good effects, and I without hesitation opened the vein again, and allowed the blood to flow till syncope was nearly produced. After this bleeding the symptoms were decidedly relieved; the improvement was progressive, and in the course of an hour had nearly disappeared. This was certainly the most alarming case of the kind I ever witnessed; for every instant suffocation seemed about to end the patient's sufferings. It would appear that there was a disposition in this child to contract the dis-

ease ; and that such a disposition does sometimes exist, no one can doubt. This case strongly illustrates the good effects of blood-letting in this species of the complaint.

So quick does this form of the disease run its course, that there is seldom any false membrane to be found in the respiratory tube, but its whole course will generally be found more or less inflamed. I need not add, that had the above case offered resistance to the means employed, the plan recommended in the last species would have been here indicated.

SPASMODIC CROUP.

Children are liable to a spasmodic form of croup, which mostly takes place suddenly and at night, like the other varieties. I have known it occur every night, or every other night, for two or three weeks ; and some children are liable to occasional returns of it, a greater or less time intervening. It is purely spasmodic in the first instance. Children are often

attacked by this disease during the period of dentition. A foul or disordered state of the stomach may also act as a cause. Exposure to a cold, damp atmosphere may likewise produce it.

The disease begins with hoarseness and a croupy cough; tightness of the chest and paroxysms of suffocation follow; the child seems much distressed and agitated, the limbs become cold, the pulse will be found quick, but during the intervals slow. There is no disposition to sleep, and the appearance of the eyes would lead us to suppose the presence of cerebral excitement; and the fever, if any, is trifling. This may be distinguished from the inflammatory form, by the absence of drowsiness and heaviness in the head; the cough is not so well marked; during the intermissions the pulse being found slow, and the paroxysms sometimes disappearing suddenly. An emetic should be given immediately, and a drastic enema should be exhibited, in which a little assafoetida is dissolved. After the operation of both these remedies, or even of the emetic alone, the patient will sometimes appear so far relieved as not to require any further assistance; but should not this fortunately

be the result, blood should be taken from the arm or jugular vein, having first tried the effects of a warm bath. The gums should be always attended to, and lanced if necessary. Should the symptoms still prove obstinate, it is probable the disease will assume the inflammatory form, the treatment of which has already been pointed out.

CYNANCHE PAROTIDÆA,

OR

THE MUMPS.

THIS disease seldom attacks children under five or six years of age. It is contagious, and frequently epidemic. It is of a comparatively mild nature, and generally runs its course in a few days, frequently not requiring the aid of medicine. It is ushered in by slight symptoms of pyrexia, which are followed by the appearance of a hard, painful, and moveable glandular tumour at the corner of the lower jaw, which may be detected on one, or more generally both sides of the neck, sometimes extending from one side to the other; and in this way the maxillary glands become the seat of inflammation as well as the parotid. The swelling continues to increase till the fourth or fifth day, from which time it gradually lessens in size, and soon entirely dis-

appears. The feverish action abates with the lessening of the tumour.

About the age of puberty, the sudden disappearance of the tumour will frequently be followed by the sympathetic enlargement of the testicles in the male, and in the same way the breasts of the female become painful and enlarged. A metastasis will likewise sometimes take place to the head, but those metastases should be treated on general principles, that is by bleeding, purging, and those remedies usually employed when congestion or inflammation takes place from other causes. Some have recommended the use of irritative applications to the neck when a metastasis has taken place, with a view of again exciting the swelling or diseased action in that part, but this has always proved futile to me.

I have generally found this disease much milder when occurring in warm weather; but I have known fever run high, and produce much constitutional derangement, during cold or damp seasons, at which time I have observed metastasis more frequently occur. I have never known one of these tumours run on to suppuration; however, when people advanced in years become the subjects of it,

which is occasionally the case, the progress of the inflammation cannot be stopped, the suppurative process takes place, and the sore assumes a foul and unhealthy character.

Treatment.

For the cure of this disease, I have found an emetic of essential service, after which a dose of calomel and antimonial powder should be directed, followed by a purgative draught. A stimulating embrocation or a poppy fomentation may be applied, and an antiphlogistic regimen recommended. If the fever run high, and there be much local or constitutional irritation, it will be necessary to have recourse to those remedies calculated to stop its progress, such as local or general bleeding, purgatives, and small doses of tartar emetic. Be the disease ever so mild, the patient should avoid exposure to cold, as he will be more than usually susceptible during the continuance of this complaint.

PERTUSSIS, OR HOOPING COUGH.

THE symptoms of this disease in the first instance are so like those of common catarrh, that they are generally supposed to be such. The cough is frequent, and probably attended with a little feverish action. The eyes are not unfrequently swollen, and slight heaviness or pain in the head may be complained of. I have always found the paroxysms most frequent during the day; the night attacks being less so, though more violent. The circumstance of their occurring more frequently during the day, may be accounted for by many accidental causes, such as the exertion of talking, laughing, or any other excitement.

The disease will sometimes be found to assume its characteristic symptoms very early, in other cases they are more tardy in showing themselves.

Hooping cough is frequently epidemic, and no doubt contagious.

In about a week, or in some cases two or three weeks, from the first appearance of the symptoms, a paroxysm of coughing takes place of a convulsive character. For some time the patient cannot respire, and when he does recover his breath, the act of inspiration produces a hissing or crowing noise, caused by the air passing through the glottis and larynx. Another fit of coughing takes place, which will be followed by a similar noise. Several paroxysms of this description may follow each other, till vomiting occurs, when with the contents of the stomach, a quantity of thick, ropy phlegm is discharged, and in this way the paroxysms often end. The frequency of these paroxysms varies much, in some cases not occurring more than four or five times each day; but in others nearly as often within an hour, leaving the little patient after each fit in a complete state of exhaustion. This frequency of paroxysms does not continue through the whole stage of the disease; for after a certain period, the expectoration will consist of mucus. I have observed when this change takes place in the nature of the expectoration, that the disease

is generally on the wane, and the paroxysms lessen in number and violence from that time. The fit is very often brought on by crying, or the slightest exertion or movement of the body: the patient is generally aware of the approach of a paroxysm. In some cases, during the intervals, the spirits and appetite often remain unabated; but if the contrary be the case, and there be a quick pulse, and difficulty of breathing, we may suspect some local irritation or inflammation. There is generally a determination of blood to the head during the fit, the veins of the neck appear very much distended, and the face becomes red and livid. The cough preventing the free return of the blood from the head, apoplexy may take place, and I have not unfrequently known very young infants attacked by convulsions.

Hooping cough will generally run its course within a month or two, and sometimes within a fortnight or three weeks; but in one instance I have known the symptoms not entirely subside for two years.

This disease mostly prevails in the spring and winter months, at which periods it is the most difficult to subdue; but when it occurs during the summer, it is generally milder and of a less harassing

nature: but this is a remark which will apply equally to any other affection of the chest. Children of a scrofulous habit, and those who are predisposed to affections of the respiratory organs, are the most liable to it; and as we might a priori expect, the cure is then more tedious and uncertain. Speaking in a general way, this complaint is not in itself of a dangerous character, but it appears more so when very young infants are the subjects of it.

Treatment.

Innumerable remedies have been employed in this complaint. I shall merely allude to those which strike me as being the most useful. Bleeding is in many cases strongly indicated. In those cases in which there is local determination of blood to the head or chest, which in severe attacks always takes place more or less, we should not hesitate in applying leeches, or drawing blood from a vein; the quantity should be proportioned to the age and constitution of the child. Some maintain that this complaint is of a purely inflammatory nature from the commencement; but in this opinion I cannot coincide, as the majority of cases are unattended by the symptoms that denote increased action.

I am of opinion that this disease is decidedly spasmodic in itself; but from the circumstance of its almost always attacking children, and from the well-known disposition that exists in them to take on inflammatory action, we should most narrowly watch the progress of the symptoms. The head will sometimes become affected; and when we consider how frequently the vessels of that part are over-loaded with blood, and how great a mechanical obstruction is offered to its return by the violence of the cough, we cannot be surprised that cerebral irritation should take place.

If the child complain of pain in the head, during the intervals, it may become necessary to apply a few leeches, and to attend more particularly to the state of the intestinal canal. Should the difficulty of breathing become troublesome, accompanied by pain and a quick pulse, we may suspect the lungs to be in a state of congestion or inflammation, and in this case bleeding would be obviously necessary. However, I must caution the practitioner against carrying bleeding too far, as the exhaustion produced by the cough and that combined may and does very often lay the foundation for infantile fever and marasmus.

The good effects of bleeding may be made more

permanent by producing a crop of pustules by means of the tartar emetic ointment; however, this should not be applied till the symptoms of excitement are pretty well allayed; and I may add in this place, that irritative applications of this description, in which I particularly include blisters, when applied before the symptoms are sufficiently relieved, almost invariably favour the increase of fever, and of inflammation or congestion in the lungs.

After the abstraction of blood, and indeed throughout the course of this disease, it will always be of consequence to attend to the state of the stomach and bowels, and to adhere to the antiphlogistic plan. Small and repeated doses of ipecacuanha and antimonial powder should be given, with a view of promoting action on the skin, and free expectoration. An emetic should be given on the first appearance of hooping cough, and a slight sensation of nausea kept up, so that vomiting may be more likely to occur upon the accession of the paroxysm. The state of the bowels should be attended to, and when a purgative is necessary, I should recommend calomel, as it not only produces the desired effect, but has always seemed to me to possess an indirect influence on the disease. It may

be followed by a laxative draught, composed of the infusion of senna and manna, with the tartrate of potash or the sulphate of magnesia, and a drop of one of the essential oils. I have sometimes found it necessary to administer an emetic every, or every other day. Upon the whole, I consider ipecacuanha the best fitted for that purpose, as it has generally appeared to me to act more speedily, and undoubtedly its effects are attended with less exhaustion than antimonial emetics, which in this disease is a material reason for its preference. We should endeavour to let the child breathe an equalized temperature, as the respiratory organs are generally very susceptible.

The fresh powder and extract of belladonna have been strongly recommended, and certainly in some cases I have witnessed their good effects in lessening the length and violence of the paroxysms. I have found an embrocation composed of oil of amber, oil of turpentine, and laudanum, sometimes produce the most beneficial effects; it may be used two or three times a day. Inhaling the steam of a decoction of the fresh leaves of hemlock, alone or with æther, I have known to be of use.

In one case threatening instant suffocation, I

recollect seeing the marked and excellent effects of musk. Small doses of Dover's powder with hyoseyamus or digitalis will be found a useful combination, and may be had recourse to with advantage. The extract of hemlock sometimes proves highly efficacious, but its effects are not always to be depended on; however, when combined with ipecacuanha and the subcarbonate of soda I have sometimes found it of great use. In very young children I have known an injection of assafœtida assist materially in relieving the spasm. I have lately had three children in the same family under my care, labouring under a severe and most obstinate form of this disease, to whom I gave a combination of Dover's powder and superacetate of lead, and in these cases, decided and speedy relief was obtained.

I have sometimes known it come on periodically, and have seen small doses of sulphate of zinc given; but in such cases, I should most strongly recommend the sulphate of quinine, as I have not unfrequently witnessed its good effects. Cullen looked upon bark in this form of the disease, almost as a specific.

Should the child be attacked by convulsions, the

warm bath ought to be immediately used, and a quick operation of the bowels induced by means of a purgative clyster, to which some antispasmodic may be added. These means will sometimes be sufficient; but should they not prove so, and the child be of a full habit, general bleeding must be employed, or leeches applied to the head without loss of time. It may be necessary to apply a blister to the nape of the neck.

It has been asserted that change of air alone will effect a cure; but this I doubt much, though it is very efficacious when the urgency of the disease is abated. I am convinced that it will always run its course independent of art; but it cannot be questioned that its violence may be palliated by appropriate remedies, of which I believe I have mentioned the most effectual.

I shall conclude what I have to say on this disease, by pointing out the necessity of watching the occurrence of pneumonic and head symptoms, as I do not hesitate to say that almost all those who die during its progress, are cut off by inflammation or congestion of one or other of these parts.

ENTERITIS, OR INFLAMMATION

OF THE

INTESTINES.

CHILDREN are sometimes the subjects of this disease. When it occurs in very young infants, it may often be attributed to exposure to cold, to damp linen, and sometimes it may be traced to the unhealthy state of the breast milk, giving rise to a deranged or disordered state of the stomach and bowels, producing cholic, and ultimately ending in peritoneal inflammation.

In children advanced in age, it is very generally produced by the presence of irritating matter, constipation, cholic, exposure to cold, and sometimes intus-susception. A considerable pain is produced by applying pressure to the abdomen; there is much febrile action, and not unfrequently obstinate vomiting. The motions will generally be found of an unhealthy and indurated appearance; they are some-

times slimy, offensive, mixed with blood, and frequently evacuated with great pain. There is much thirst, and no inclination to take food.

This disease may be distinguished from cholic, for which a casual observer might mistake it, from the circumstance of the pain being constant, and increased by pressure, as well as from the fever which accompanies it. The pulse too is small and quick. If this state of things be allowed to continue, the patient ultimately sinks from continued fever, pain, and exhaustion.

Treatment.

In the treatment of this disease, which I consider of a most alarming and dangerous character, loss of time will often end in the loss of the patient; therefore the more decided and prompt our treatment is, the greater will be our chance of saving the child.

In very young children, the first step to be pursued will be the application of leeches to the abdomen, regulating the number according to the age of the patient, and the severity and urgency of the case. A dose of castor oil, or any other mild but

effectual purgative should be exhibited, after which the child should be placed in a warm bath. Should the laxative not have operated at the expiration of two or three hours, it should be repeated, while the action of the bowels may be still further solicited by an injection. After sufficient motions have been procured, opiate clysters will be found highly efficacious in lessening irritation. When blood has been abstracted in time, and in a sufficient quantity, it will seldom be found necessary to repeat the operation. However, should the symptoms not be sufficiently alleviated, we must not hesitate in again taking away blood, for whatever other remedies we may employ, we must mainly depend on a judicious and well-regulated abstraction of that fluid.

Many practitioners recommend the application of blisters in these cases from the commencement, before any other remedy has been used: but I must dissent from this practice, as I consider their application in the early stage highly detrimental, by increasing general irritation and excitement. On the other hand, where a blister is applied after the inflammation has been pretty well allayed, it will sometimes prove invaluable; taking care however

to remove it, as soon as a slightly inflamed surface has been produced.

When this disease attacks older children, the same plan of treatment is indicated, differing only in the mode of abstracting blood, which should be done by opening a vein in the arm. If the case be urgent, the child should be placed in a warm bath during this operation. Should the inflammation be not sufficiently subdued, it may be necessary to have recourse to local bleeding by the application of leeches. Fomentations may be sometimes employed with advantage, but I consider the application of a warm poultice sufficiently large to cover the surface of the abdomen preferable.

It may be as well to add, that the appearance of the blood in this species of peritoneal inflammation, should be no criterion as to the urgency of the disease, as in the most acute cases, the blood seldom exhibits the buffy coat. This observation will more particularly hold good in the commencement of the disease. We must likewise bear in mind, that however high the symptoms may run, the patient will generally be found to have a quick small pulse.

GASTRITIS, OR INFLAMMATION

OF THE

STOMACH.

INFLAMMATION of the stomach I believe to be of rare occurrence, more particularly in early infancy, when the child is restricted to the breast milk. The characteristics of this disease are, considerable pain and tenderness in the region of the stomach, attended by febrile action, incessant nausea or vomiting, the smallest portion of food, whether solid or fluid, being instantly rejected. There is great uneasiness; heat and soreness of the throat, and aphthæ may sometimes be discovered in the mouth and fauces. The child complains of thirst; the bowels are often relaxed; but sometimes a contrary state, or that of constipation exists.

Treatment.

The treatment of this disease is similar to that recommended in enteritis, only differing in the mode of administering laxatives, which should be given in the form of clysters, the irritable and tender state of the stomach precluding the possibility of exhibiting them otherwise. I do not consider it necessary to enter more fully into the treatment, as in so doing, I could merely recapitulate what has been already said.

VERMES, OR WORMS.

THE stomach and intestinal canal are liable to be infested by worms. They are more frequently met with among children than adults, owing to the prima via containing a greater quantity of mucus, on which it would appear they exist. Worms have been met with in various parts of the body, and it has been asserted they sometimes perforate the intestines; but Frank, whose researches were indefatigable on this subject, never met with an instance of the kind. All animals are more or less subject to worms; but they are generally found in greater abundance in the domesticated, such as the cat, dog, &c.; in these animals they differ but little from those found in the human body.

They are said sometimes to exist at birth; and are most common in cold and marshy climates. Weak and unhealthy children, and par-

ticularly those of the poor, whose living is scanty and not of the best description, would seem particularly disposed to worms; but in the most robust children I have known them to be expelled after severe attacks of enteritis. Living on a crude vegetable diet, such as cabbage, &c., and eating unripe fruit, will often produce them; and in fact any thing that causes derangement of the digestive organs may give rise to them.

It is generally said, that those children who subsist entirely on the breast milk are not liable to them, but this is not the case, as I have in two instances, but certainly not in more, known the contrary to occur. There are those who attribute all complaints either directly or indirectly to the presence of worms.

There are various kinds of worms; but it will only be necessary for me to speak of those which are mostly found to infest the stomach and bowels of the human frame, of which the following are the principal.

THE LUMBRICUS TERES, or ROUND WORM, is almost always found in the jejunum or ileum, and occasionally in the duodenum; but I have had one case in which several passed from the mouth of the

patient, and have known another instance in which they passed from the nostrils. They vary in length from six to twelve or sixteen inches. There is, I believe, always a plurality of them, and they are not often met with after puberty. This description of worm is sometimes found in the horse and pig.

The symptoms indicative of their presence, are derangement of the digestive organs more or less. Occasional sour eructations, fœtid breath, and irritable state of stomach will sometimes exist, the contents of which will likewise smell sour. Gripping pains in the abdomen, very often in the neighbourhood of the umbilicus, diarrhœa, and occasionally tenesmus, are present, and pieces of the worms may sometimes be detected in the evacuations. There is a sympathetic dry cough and itching of the nose, the abdomen will be hard and distended, particularly towards night. The patient is in general pale, and the under eyelids have a dark leaden appearance; he complains of a sensation as if something were moving in the stomach, which ceases after eating; he often starts in his sleep, and grinds his teeth; the appetite is generally good, and in some instances voracious.

The ASCARIDES, or THREAD WORM, sometimes called the maw worm. They are almost always found in the rectum, are of a yellowish white colour, may be compared to bits of thread half an inch in length, and are very lively in their movements. The itching they occasion about the rectum is great, and so troublesome as often to prevent sleep. They sometimes crawl out of the rectum, and have been known to find their way into the vagina and bladder of the female. The evacuations are sometimes offensive and slimy. The occurrence of procidentia ani may sometimes be referred to them. I have known ascarides exist in great abundance, of which there was no other symptom than itching at the anus. I have likewise known them to be very abundant even where this was not present. A dilatation of the pupils is not an unfrequent symptom of ascarides. These worms are found in the pike and frog, and not unfrequently in the calf.

The TENIA, or TAPE WORM, so called from its similitude to a piece of tape, is not unfrequently met with. It is flat, with a long and jointed body, found in children and adults. It may be detected either in the large or small intestines, but the

ileum is the part of the canal where it is generally found. It is of a soft texture, and consequently readily undergoes decomposition when voided. This worm is not often found to exist with the other species; it varies in length, but does not often exceed fifteen feet. Platerus mentions having seen it of the length of forty feet. It is said to be solitary, but this is not always the case. It is seldom found in children under five years old. The appetite is sometimes very great from the presence of this worm; the patient complains of a gnawing in the stomach; one of the first symptoms is nausea or sickness. I have known it produce a state of great uneasiness, hiccups, and involuntary muscular action; occasionally convulsions, chorea, remittent fever, and marasmus follow.

This description of worm is the most dangerous, and most difficult to dislodge, for though portions of it may come away, it has still the power of reproduction. On some parts of the continent it is very common, Holland and Switzerland in particular. In the cases of tape worm that have fallen under my observation, I have generally found the pupils of the eyes permanently dilated; and in my opinion this may be looked upon as the truest pathogno-

monic symptom. The tape worm is found in the sheep, cat, and dog.

The TRICHURIS, OR LONG HAIR TAILED THREAD WORM, was first described by Roederer about seventy years ago ; a more accurate description of it has since been given by Dr. Hooper. This worm, when arrived at its full growth, measures about two inches in length, two-thirds of which form a tail, ending in a fine point resembling a hair. The body is about one-sixteenth of an inch in breadth. It has been detected by Blumenbach and others in the jejunum, the inferior part of the ileum, and rectum. It is most frequently found in the ileum. All sweet substances, sugar, fruit, &c. are generally said to encourage worms ; but according to some, sugar is deemed highly deleterious to them. After all that has been said, the symptoms of the presence of worms are equivocal ; in fact, the only way we have to prove their actual existence is by ocular demonstration ; for it must be acknowledged that those symptoms generally laid down as indicative of worms, are often the concomitants of a depraved and weakened state of the digestive organs. I have not unfrequently known a disordered state of the

prima via produce almost unequivocal symptoms of worms.

Their presence is not always productive of bad health; for I am acquainted with a gentleman who has been subject to ascarides all his life, and has now reached the age of sixty without feeling any bad effects from them. In this instance various remedies have been employed from time to time, without producing any decided or continued relief; but in many instances I have known worms materially influence the state of the health. All intestinal worms die soon after their exposure to the air. Rush gives it as his opinion that they are useful, and consume all the superabundant mucus.

It would be deviating from the plan I purpose following in this work, were I to enter into an investigation of the nature, history, and origin of worms; as it is a subject buried in great obscurity, and surrounded by numerous difficulties. Many writers are of opinion that their formation is spontaneous; while others think that ova are the source of their propagation; the latter opinion appears to be the most generally adopted. It is sometimes

very difficult to produce the expulsion of worms, and of the tape worm in particular, which is generally owing to the quantity of mucus in which they are involved and protected. In the treatment of worms our first object should be to expel them, and afterwards to do away with the predisposing cause.

Treatment.

I shall merely take notice of those remedies which are generally employed, as it would not answer any practical purpose to enumerate the multitude of anthelmintics which abound in authors. I shall first speak of those supposed to act mechanically. The spiculæ of the *dolichos pruriens*, or cowhage, possesses no doubt the power of expulsion; the exhibition of this medicine should be preceded by a brisk purgative, with the view of lessening the quantity of mucus; afterwards the spiculæ or down of the small pod may be given mixed in a little honey or jam, for three or four mornings upon an empty stomach, during which time it will not be found to produce any sensible effect. The cathartic should be again given, the operation of which will generally bring away the

worms. The necessity of repeating the cōwhage must of course depend upon circumstances.

The filings of tin is another remedy which I have not unfrequently used in cases of worms with success. It should be administered in doses of twenty or thirty grains, in the form of electuary, with a little of the confection of roses, and given for three successive mornings, at the expiration of which time, a full dose of calomel and jalap should be given. It is said occasionally to have proved highly irritating and deleterious*; but I have frequently used both the filings and the powder without their having been in a single instance productive of any bad effects.

When the presence of ascarides is suspected, a drastic purge should be given of jalap, scammony, or aloes, with a grain or two of calomel. An aloetic purge is to be preferred, owing to its exerting a particular influence on the rectum, this being the part of the canal in which they are generally found. After this we may throw up, in the form of clyster, a little aloes and assafoetida dissolved in gruel; this plan will very generally free the patient from

* Vide Gregory's Practice of Physic, p. 535.

them; but should this not be the case, an injection of the oil of turpentine in gruel, will almost certainly destroy them.

Some of the chalybeate waters have been strongly recommended, and those of Harrowgate in particular. They should be taken internally, and exhibited in the form of enema. The benefit to be derived from them is principally owing to their purgative effects; certainly not from any specific properties they may possess over other saline purgatives. Common salt is sometimes employed as a vermifuge with good effects. Indeed I have witnessed its success when many other remedies have failed. At the same time that it is taken into the stomach, it may be given in the form of clyster. A decoction of cabbage bark as an enema has been recommended as possessing anthelmintic qualities. An injection of warm lime water has been employed, as it is supposed to dissolve the mucus in which the worms are imbedded. Castor oil, or olive oil warmed, has been administered in the same way. These remedies are said to act by insinuating themselves into the pores of the worms, and thus preventing respiration.

Tobacco has been sometimes used in the form of enema; it is a violent remedy, and I should caution practitioners who may use it even in this form; for in one instance in which I saw it used, the effects proved nearly fatal to the child.

In cases of *lumbricus teres* and tape worm, clysters are not so strongly indicated, as those worms are not often within their reach, being generally found, as I have already said, in the small intestines.

The most certain remedy with which we are acquainted is the oil of turpentine. I have generally found a tea-spoonful a sufficient dose for a child two years old. This quantity should be given every other day for a week, while on the intermediate days a purge should be administered; in all cases, previous to the exhibition of this remedy, the bowels should be briskly acted upon.

The *trichuris* should be treated on the same general principles as those pointed out for the other species. After the patient is apparently free from worms, we should bear in mind, that those whose digestive organs are weak, and irregular in the performance of their functions, are the most liable to

be attacked by them ; we should therefore endeavour to prevent their reproduction, by directing a light and nutritive diet ; at the same time those medicines should be given which increase the tone and strength of the system generally. I have found a draught, composed of infusion of gentian or columba, combined with an equal portion of infusion of rhubarb, and a few drops of the compound spirit of ammonia, of great use after the expulsion of worms ; the rhubarb, independent of its tonic properties, generally producing a gentle effect on the bowels.

DISEASES OF THE SKIN.

[In describing the following cutaneous diseases, it will be observed, that I have very generally adopted Drs. Willan and Bateman's descriptions, considering them the most correct.]

RED GUM.

STROPHULUS INTERTINTCUS, OR RED GUM,

Is a papular eruption, and generally appears on the face, neck, and fore-arms. It occasionally extends over the whole surface of the body. The papulæ are of a vivid red colour, and rise above the surface of the cuticle; they are generally distinct, but will occasionally form large patches, and are surrounded with a red base. The papulæ seldom assume a pustular character, but when they do, they are found to contain a little yellowish fluid, which becomes absorbed, leaving behind a little scurf. This disease varies in its continuance, and will generally show itself within the two first months of a child's life, and I have known it appear and disappear frequently within that period. The constitution does not seem to be affected by it, as there is no fever,

and the secretions and excretions are carried on with uninterrupted regularity. I have usually found the eruption more distinct on the feet and backs of the hands.

Though this disease of itself is of a mild nature, I have known its sudden disappearance produce convulsions and obstinate diarrhœa. Dr. Underwood and others have attributed this complaint to a predominance of acid in the prima via ; but when we consider with what regularity the digestive organs generally carry on their functions through the whole course of the disease, this opinion does not hold good ; but doubtless it may sometimes depend upon functional disturbance of the digestive organs.

Treatment.

During the progress of this disease, strict attention should be paid to cleanliness, and the child may be spunged once or twice a day with tepid water, and a mild laxative directed. But should the eruption be suddenly suppressed, the child must be placed in a warm bath, a tea-spoonful of castor oil should be given, and repeated every two hours till the bowels are acted upon. I have often found

such a plan successful in recalling this as well as similar eruptions.

STROPHULUS ALBIDUS, OR WHITE GUM.

This is merely a variety of the red gum : it mostly appears on the neck, face, and breast, and consists of small whitish or pearly specks, a little elevated, and often surrounded by a slight redness ; there is no fluid discharged upon separating their tops. This disease is more tedious in its progress than the first mentioned, and like that is seldom accompanied by constitutional disturbance. The treatment differs in no way from the preceding.

STROPHULUS CONFERTUS, OR TOOTH RASH.

This eruption generally appears about the period of dentition, varying from the fourth to the fifth or sixth month after birth. A numerous papular eruption appears generally on the sides of the nose and cheeks, extending occasionally to the arms and forehead, but seldom to the trunk. The papulæ vary in size. They are small and more crowded on the

face: they are not of so vivid a colour as in the red gum. When they appear on the back and loins, they do not approximate so closely, but are generally much larger, and surrounded by an inflammatory circle. Some of the papulæ will be found to contain a watery fluid, which upon the disappearance of the inflammation becomes absorbed. About the seventh or eighth month, one or two large patches appear on the arms, shoulders, and neck: the papulæ are of a considerable size, hard, and so crowded together, that the whole surface exhibits a red colour. It is at its height in about a fortnight; the papulæ become flat at the top, the cuticle exfoliates from the affected part, the skin below remaining for a week or two irregular, rough, and discoloured.

Occasionally an obstinate and painful modification of this disease takes place from the calves of the legs to the umbilicus, involving the thighs, loins, &c., and being close together and numerous, they produce a continued redness over these parts. The cuticle becomes cracked and shrivelled, and is thrown off from the skin in large pieces. The complaint may again occur in a short time, going through the same course, and may recur several

times within three or four months; and the child will sometimes be subject to occasional attacks for twelve or eighteen months.

I once saw a case of this disease occurring in a child two years old. This child was of a delicate constitution, and was remarkably backward in teething even at that age. I have never seen a case of this disease occur before the process of dentition had manifestly commenced.

Treatment.

There is very generally a little feverish action attending this complaint; but when the eruption is extensive, the irritation produced is sometimes so great as to give rise to fever and restlessness. However, an occasional dose of rhubarb with calomel will be found the only medicine required. The state of the gums should be attended to, and if they be swollen or inflamed, the gum lancet should be freely drawn along them.

STROPHULUS VOLATICUS.

This species arises successively on different parts

of the body in small circular patches or clusters of papulæ; the number in each cluster varying from three to twelve. The papulæ and interstices are of a red colour, and continue so with a little heat and itching for about four or five days; then they turn brown, and begin to exfoliate. When one patch disappears, it is succeeded by another at a small distance from it; and in this way the face, body, and limbs become affected, ending in three or four weeks, during which time feverish action will sometimes be present, indicated by a quick pulse, a white tongue, and general uneasiness and restlessness. This complaint mostly appears between the third and sixth month.

Treatment.

The symptoms of this complaint are sometimes so trifling as not to require notice. The bowels should be kept open by the exhibition of gentle laxatives; and cleanliness, which contributes so much to the cure of cutaneous diseases, should be strictly attended to. Ointments are recommended by some practitioners, but I am of opinion they often tend to exasperate the complaint, and consequently to prolong it.

STROPHULUS CANDIDUS, OR PALID GUM RASH.

The papulæ in this form of strophulus have no inflammation round their base ; they have a smooth, shining surface, and appear of a lighter colour than the surrounding cuticle. The papulæ are larger than any of those already described ; they appear on the arms, shoulders, and loins, diffused at a considerable distance from each other. Children are generally attacked by this disease at the age of ten or twelve months. Willan says it most commonly succeeds acute attacks of inflammation of the lungs or bowels ; but this observation does not by any means always hold good, as it frequently attacks children who have never been the subjects of acute disease. The papulæ remain hard for a week or ten days, when they gradually subside and disappear altogether.

Treatment.

I may here point out the necessity of guarding the patient from exposure to cold air, as a sudden repulsion of any skin complaint always proves more or less dangerous. An occasional laxative with strict attention to diet are all that is necessary.

LICHEN URTICATUS, OR NETTLE LICHEN.

THIS sometimes proves an obstinate and troublesome affection, and in the cases which have fallen under my observation, it has generally occurred within a week after birth ; children from that period to the age of five or six months are the most subject to it. Dr. Underwood seems to think it in some measure connected with dentition, and found it recurring “uniformly a little before a tooth has been cut.” I have frequently known it disappear altogether for three or four days, or as many weeks, and return again in an unabated and sometimes an aggravated form. The eruption may generally be observed on the trunk, and on its first appearance it has a great resemblance to flea-bites, forming red or inflamed wheals, somewhat similar to those produced by the stinging of nettles. In the course of

two or three days the redness disappears, and is succeeded by minute, raised, reddish papulæ, which sometimes itch intolerably, particularly during the night. As these nettle-like patches disappear, they are followed by others, and ultimately the abdomen and loins are spotted with papulæ; but on the lower extremities they are frequently confluent, and are generally more numerous, forming little irregular patches. This is by no means a disease of any moment in itself, nor is it of frequent occurrence; but from the great irritation it occasions on the surface, it gives rise to febrile action, restlessness, and inability to sleep, and therefore demands our attention.

Treatment.

For the cure of this disease it is necessary to attend to the state of the bowels, therefore a dose of castor oil should be occasionally given. The warm bath is commonly recommended, but from the very irritable state of the skin, I have generally found it add to the irritation, rather than lessen it. A tepid lotion of decoction of poppies, is in my

opinion far preferable, and in some cases a weak Goulard lotion will be found useful, either alone, or combined with the decoction of poppies, either of which will seldom fail in allaying the irritation. I have never found it necessary, when I have pursued this simple mode of treatment, to employ opium or any other narcotic.

PITYRIASIS CAPITIS, OR SCURFINES OF THE HEAD.

THIS complaint, if I may be allowed to call it one, is generally produced by want of proper attention to cleanliness. Very young infants are frequently the subjects of it, from the dread entertained by parents of their catching cold if their heads be washed; and I have known this prejudice exist in families above the common class. It is merely an accumulation of a dry white or greyish scurf, appearing first on the upper part of the forehead, and extending very generally to the lateral and back parts of the head. A thin moisture will frequently exude from it.

The deposition sometimes becomes so thick, and itches so much, as to cause the child to scratch or pick it off, leaving the part exposed, as if slightly inflamed. For the removal of this scurfiness, it will be sufficient to wash the head well, night and morning, with soap and water. Should it be thickly covered with hair, it will be necessary to remove it.

PORRIGO LARVALIS, CRUSTA-LACTEA,

OR

MILK BLOTCH.

THE disease I am about to describe is in most cases observed to make its appearance on the forehead, cheeks, chin, or ears. It generally attacks the child while at the breast, and during the process of dentition. I believe it to be peculiar to children, who are seldom affected with it after the age of four or five years. I have seen it appear within a month or two after birth. In such cases, it will often disappear on the cutting of a couple of teeth, but sometimes continue until the first set of teeth are completely through.

Pustules of a white, pearly appearance, varying in size and number, are first to be observed; by degrees they assume a brownish colour, after which they break and discharge a clear or straw-coloured glutinous matter; a scab is formed, and there proceeds from it an ichorous discharge. The disease will sometimes extend to the neck and scalp. I

have seen the whole of the face, except the nose, literally encased, as it were, with dark brown scabs. In this instance the disease made some progress over the scalp, and the discharge was of a highly acrid nature. Crusta lactea occasionally extends to the chest, neck, arms, and lower extremities. There is generally a redness of the skin left after the scabs drop off or come away, which will sometimes continue for a considerable time; but I have never seen, even in the most troublesome and inveterate cases, any lasting scar or mark left.

Although this disease is not of a dangerous character, I am nevertheless inclined to attach more importance to it than writers generally do. I have known the itching so great as to produce a vast deal of fever and constitutional disturbance.

Treatment.

To relieve the itching, I have used with the most salutary effects a lotion composed of two parts of decoction of poppies, to one of Goulard water. Dr. Underwood and others recommend the application of a blister. The antiphlogistic plan must be pursued as far as it is practicable. The state of the bowels should be strictly attended to,

and two or three grains of hyd. cum creta, or small doses of calomel, should be given every night, or every other night, as an alterative. Sulphur in various forms has been recommended in this disease, and sometimes proves beneficial: it may be given internally and employed locally at the same time. Some have recommended unctuous applications, but I think they very often exasperate the complaint. I have however used the citrine ointment, diluted in the proportion of one drachm to six or seven of spermaceti ointment, with excellent effects.

It is sometimes necessary to secure the child's hands when the itching is very great. Care should be taken to prevent the discharge from coming in contact with the surrounding parts; and where tonics are not contra-indicated, steel wine or the compound decoction of sarsaparilla, with the subcarbonate of soda, will be found of use.

PORRIGO SCUTULATA, SCALLED HEAD,

OR

RING-WORM OF THE SCALP.

THIS becomes a very troublesome and obstinate complaint if suffered to gain ground, but if attended to in time, may generally be eradicated speedily. It appears on the scalp, forehead, and neck, in the form of distinct irregular and circular patches, on which arise a number of small yellowish or straw coloured pustules; on bursting they discharge their contents and form scabs, upon removing which the part underneath appears red and shining, and very small papulæ may be discovered upon minute examination. On the part of the head affected, the colour of the hair becomes lighter and drops off, decaying at the roots. The itching produced by this complaint is generally very great: the child from scratching the pustules breaks them, and the consequent discharge tends to contaminate the sur-

rounding parts, and in this way, from want of proper attention, the whole of the scalp may become encrusted with scabs.

This disease generally attacks children between the ages of three and six : the older they are the more tedious is the progress of cure. Dr. Bateman is of opinion that the disease may arise spontaneously in children of a full and flabby habit, who are badly fed, where cleanliness is not attended to, and where sufficient exercise is not taken ; but that it is generally communicated by contagion, such as using the same towels, combs, caps, &c. The latter is decidedly my opinion, as many cases have fallen under my observation, and in every instance I have been able to trace them to contagion, though I have no doubt a disordered or debilitated state of health may generally so far influence the disease as to aggravate it and to retard its cure.

Treatment.

When this disease has not made much progress, nor extended far over the head, the hairs should be removed by means of a pair of tweezers or forceps,

not only from the diseased surface, but from the surrounding parts, to the extent of a quarter of an inch ; after which the part affected should be well squeezed, so as to empty the pustules, taking care that their contents do not come in contact with the healthy skin. The part should be then well washed with soap or milk and water, and a small portion of an ointment rubbed in thoroughly night and morning, composed of a drachm of common snuff to half an ounce of the mild mercurial ointment: previous to each application, the head should be again well washed. Should much pain and irritation be produced (which will sometimes be the case from the application of this remedy), the quantity of snuff should be lessened, or it should be used but once a day. I have found this form of ointment very useful.

Whenever the local irritation is great, it would be advisable to allay it before the application of any remedy ; for which purpose the wash recommended in the *crusta lactea*, adding at discretion a little of the extract of poppies, will generally be found to answer the purpose. It must not be supposed that I consider the ointment recommended

above a specific, as it will sometimes fail, as well as other remedies ; though at the same time I must confess I have been more generally successful in the use of it than of any other application. I have occasionally found the ung. hydr. nitratis diluted very efficacious ; it should be rubbed in night and morning, previously washing the head well. An ointment composed of an ounce of the tar ointment, and two grains of the corrosive sublimate, is likewise a good application.

Where the disease has been so far neglected as to have become extensive, I am persuaded nothing will be found so effectual as the pitch plaster, as recommended by Dr. Underwood. Much has been said as to the violence of this remedy, but the certainty with which it effects its purpose, more than counterbalances any pain or inconvenience it may occasion. The head should be shaved, after which it should be well washed with soap and water ; the pitch ointment should then be made quite warm, and rubbed thoroughly in, and the head covered with a cap made of oiled silk or bladder ; over which no other covering need be placed, as it is advisable to keep the head cool. I have generally

found two or three applications sufficient. The scabs become readily detached, and the hairs so loose as to be pulled out without much pain or difficulty. Should this not succeed, an addition of white hellebore has been recommended; but I have never found this necessary.

Probably there is no cutaneous disease more obstinate than this; which the innumerable remedies employed for its cure amply prove. Many have been recommended as specifics, but it is unnecessary for me to say, that numerous as they are, not one can be said to merit the appellation. Among the remedies most frequently recommended are the following. An ointment of white precipitate and sulphur; another of cantharides; a third of tar ointment and white precipitate. Ointments of caustic potash or verdigris have likewise been strongly recommended.

Some prefer the application of lotions; the following are among those commonly employed. A decoction of tobacco, either alone, or combined with a solution of subcarbonate of potash; calomel and lime water; lime water with the sulphuret of potash and soap liniment; and others recommend the appli-

cation of lime water alone, directing its internal exhibition at the same time. A plain and wholesome diet should be ordered, and the bowels should be kept in order by the exhibition of occasional doses of calomel and rhubarb. In tedious and obstinate cases, I have found a decoction of sarsaparilla, or dulcamara, with alterative doses of mercury, of use.

SCABIES, OR ITCH.

THIS is a contagious disease; and although not peculiar to children, they are so susceptible of it, that I think it right not to pass it over in silence.

Small white vesicles, slightly inflamed, appear, containing a thin, acrimonious liquor, accompanied by itching, which is sometimes intolerable, particularly when the patient is in bed, from the increase of heat determining to the surface. When these vesicles break, small scabs of a brownish colour form on them. This eruption generally makes its appearance on the fingers and wrists, extending to the axillæ, arms, thighs, hams, legs, &c. seldom if ever attacking the head or face. It is purely local, and therefore requires local remedies for its removal, nor can it be considered in any way as arising from constitutional causes.

Treatment.

The itch may be cured by the application of the sulphur ointment, which in this case may be properly called a specific. It should be rubbed in before the fire, previous to the patient's going to bed. However, there is one objection to its use—its disagreeable smell, for which reason I seldom make use of this application, as I think there is a substitute equally efficacious, and not possessing any unpleasant odour, I mean the white hellebore ointment, which may be made by adding two drachms of the powdered root to an ounce of lard or spermaceti ointment. I have long been in the habit of using this application in cases of scabies, and from the certainty of its effects strongly recommend it. Sulphur fumigations will cure this disease, and are very generally employed in France and Germany. I have found a lotion of the decoction of white hellebore and the extract of hemlock, an efficacious remedy when applied to the delicate skins of very young children.

I need not name the various remedies recommended for the cure of this complaint, as those I

have already mentioned will always be found sufficient to eradicate it. During the course of this disease, the patient should be restricted to a light diet, the bowels should be kept sufficiently open, and the strictest attention should be paid to a frequent change of linen. After the disappearance of the eruption, a couple of warm baths will be advisable.

HERPES ZOSTER, OR SHINGLES.

THIS is a vesicular disease; and for two or three days before the appearance of the vesicles, the patient labours under febrile symptoms: he complains of nausea, headache, languor, thirst, with a feeling of heat and pricking in the skin. However, the feverish symptoms vary much, and in some instances are so trifling as not to indicate constitutional disturbance. The patient complains of an itching and tingling sensation; when upon examination patches are discovered irregularly formed, and at short distances from each other, exhibiting different shades of redness; on the surface of which, clusters of small vesicles may be perceived: in the course of a few hours they will be found much enlarged, and to contain a clear liquor. Similar patches, with their vesicles, appear in succession, for three, four, or five days. The first set of vesicles

assume a turbid or milky colour, become flattened on their surface, and when they break discharge a small portion of fluid for a few days. The pustules desiccate, and fall off in the form of dark brown scabs, leaving the surface which they occupied in a slightly inflamed state, which soon however assumes a healthy appearance.

This disease is most prevalent in warm weather, and seldom attacks children under ten years of age. The symptoms of pyrexia do not always abate upon the appearance of the eruption, and I have known them to be decidedly aggravated in young children, particularly where the itching has been great.

Treatment.

Local applications are not indicated in this complaint, unless the itching and irritation be great; and then the best we can employ is Goulard water, to which may be added, if necessary, a little laudanum. When the pain and irritation are great, it has been advised to puncture the vesicles early, with a view of evacuating their contents*.

* Plumbe on Diseases of the Skin, p. 250.

I perfectly agree with that gentleman, as to the propriety of allowing the fluid to escape. The antiphlogistic regimen should be adhered to, and the bowels kept open by means of saline laxatives. Should the pain and fever be troublesome, small doses of antimonial or Dover's powder may be given with advantage.

HERPES CERCINATUS,

OR

VESICULAR RING-WORM.

THIS disease appears in patches, the forms of which are circular. Small vesicles, with slightly inflamed bases, containing a clear fluid, may be observed, studded round their circumference. These vesicles, if not previously broken by scratching, will generally discharge their contents in three or four days, after which little scabs form. That part of the skin surrounded by the vesicles assumes a dull reddish colour, and a scurfy appearance, which is thrown off as the vesicles die away. This process generally takes six or eight days. As the scabs drop off, the surface on which they stood appears slightly inflamed, and is often tender to the touch. New patches continue to

come out on different parts, for three or four weeks, running through the same course as the preceding. They generally appear on the forehead, face, neck, and arms, now and then extending to other parts of the body. The constitution does not seem to suffer from this disease in any way, unless the tingling and irritation are very troublesome, which in young children may often produce febrile action.

It has not been satisfactorily ascertained whether this disease is contagious or not. From the deductions which I have drawn from those cases which have fallen under my observation, I am inclined to think it of a contagious character.

Treatment.

The most efficacious applications are the unguentum hydrargyri nitratis, or the ung. hydrarg. nitrico-oxydi. In those cases in which lotions are preferred, any of the following may be used: calomel and lime water; an aqueous solution of alum, or of the sulphates of zinc or iron; Goulard water with spirits of wine and vinegar, or the muriated tincture of iron; the latter will often be found a very useful application.

ERYTHEMA NODOSUM, NODOSE, INFLAMMATORY BLUSH.

THIS is not an uncommon form of erythema: it mostly attacks females, though the other sex may occasionally be affected by it. It is not a contagious disease, and generally attacks children during the summer months. In most cases, a little febrile action precedes it, continuing for a week or ten days: it occasionally runs high, but in general is so trifling as scarcely to require any notice, and declines on the appearance of the erythema.

The eruption always appears on the fore part of the legs, seldom or never, I believe, extending above the knee. It first appears in large oblong or oval patches, varying in size. Their long diameter running parallel with the tibia, they rise gradually above the surface, forming hard and painful protuberances, which in the course of eight or ten days

soften and subside ; the patches become of a livid or blueish colour, and the leg looks as if bruised ; suppuration never takes place, but sometimes there is a thickening and discoloration of the skin, which do not readily subside.

Treatment.

Attention to the state of the bowels alone, is often sufficient for the cure of this disease. A few grains of calomel may be first given, which should be followed by a laxative draught : this may be repeated occasionally. As an external application, a lotion composed of a weak solution of lead and spirit of wine may be used. Dr. Bateman recommends an opiate with James's powder and calomel, when the pain is great. It will sometimes be necessary to exhibit a tonic after its disappearance, for which purpose we may order the decoction of bark, or a bitter infusion with a few drops of one of the mineral acids.

VARIOLA, OR SMALL POX.

THE history of this disease, which has so frequently desolated, not only our own country, but every part of the world in which it has ever made its appearance, must always be interesting. For though it has now been deprived of most of its terrors by the introduction of vaccination, we are still in the habit of seeing enough of its formidable power to be anxious to learn all of its history that time has left to us. Its origin is involved in obscurity, but there can be no doubt that it was unknown to any of the ancient Greek or Latin authors ; for as they have left such accurate descriptions of diseases of much less importance than small pox, they would not have given such vague accounts of that, as to render it a matter of doubt whether or not they refer to it in their writings.

From the history of small pox written by Mr. Moore, it is evident that this disease came ori-

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ginally from the east. In China it was known before the Christian æra, and in their books of medicine is described so as to leave no doubt as to its nature. With them originated the idea of inoculation, which they performed by inserting some of the variolic crusts up the nose. One would be inclined to wonder, how it happened, if small pox were so prevalent over the east in the early ages, as it undoubtedly was, that so many centuries should have elapsed before the contagion of so virulent a disease made its way into our part of the world. But there were several causes which tended to retard its introduction. Between the distant parts of Asia and Europe there was little or no intercourse, the latter continent being inhabited by people not emerged from barbarism, if we except Italy and Greece. The early conquests of the Romans were confined to the neighbouring nations, and on their decline, their conquerors were likewise Europeans. The Greeks it is true made their way into Asia, but they not only met with such obstacles as to render their return to their country very tedious, which of itself would have given time for the extirpation of the contagion even if it had been contracted by the soldiers,—the hardships they had

to surmount were such as no one labouring under it could have coped with; and as a third reason, from the horror entertained of the complaint, it is most probable that any infected person would have been immediately abandoned to his fate. The same reasons would have occurred when a partial commerce was established between the continents, namely, the tediousness and difficulties attending the journey. But we find that when commerce was more generally carried on, when Europe began to feel her own power, and navigation was so far improved as to facilitate the intercourse between distant nations, then, and not till then, did this scourge of the human race appear, leaving behind it traces of desolation which spared neither age, sex, nor country.

As early as 572, it had made its way into Arabia, appearing first among the camel drivers. It is a fact, I believe not generally known, that even in those days it was remarked that herdsmen, or those whose calling it was to attend to cows, were exempt from this disease. From the intercourse subsisting between the two countries, it reached Egypt: indeed wherever the Saracens extended their conquests, they carried the infection of small pox. The ear-

liest Arabian physician who has mentioned it was Ahron, who must have written on the subject soon after its introduction into Egypt, as it appears he lived when the Saracens were beginning their career of conquest. I believe the only accounts of his works transmitted to us, are to be found in the writings of Rhazes, who flourished in the ninth century; so that though Arabia was more particularly the seat of medical knowledge, an interval of two centuries had elapsed before any thing more was known as to the peculiarities attending small pox.

If we refer to history, we must come to the conclusion, that if this disease followed the conquests of the Saracens, Spain was probably the first European country that was infected by it; and as the conquest of that country took place in the beginning of the eighth century, we must refer its introduction into Europe to that period. From thence it would extend to the other southern countries. The time of its appearance in England is not known, but as it had reached Germany, it was most probably brought over by the Saxons. There is no doubt that it had been raging in England in the tenth century, as there is in the British Museum an

old Latin prayer of that period, in which small pox is mentioned. It was later making its way into the more northern parts of Europe : as those countries were so far behind in civilization, little or no trade was carried on, and as late as the thirteenth century it was still unknown. Perhaps temperate or warm climates are more favourable to its propagation.

From Dr. Robertson's History of America it would appear that this disease was unknown there until after Las Casas had assumed the supreme power in Hispaniola ; so that an interval of twenty-five years had elapsed from the first discovery of the New World, before this contagion was carried there ; but when it once got footing, it swept off innumerable numbers of the ill-fated Indians. But to return to our own country : small pox continued its occasional ravages, but medical science was at so low an ebb, that no improvement was made in its treatment, though much had been written on the subject, both in this country and in others, since the time of Rhazes.

It is to the illustrious Sydenham we are indebted for the most accurate opinions as to the nature and

treatment of small pox ; he was the first to separate it from measles, which had always been considered as a modification of the former disease ; and little has been added to his doctrines or improvements to this day.

VARIOLA DISCRETA, OR DISTINCT SMALL POX.

THE mild or distinct form of this disease is preceded by shivering, pains in the head, back, and loins ; thirst, heat, nausea, or vomiting, and a quick pulse ; pain is produced by pressure in the epigastric region, and the tongue will exhibit a white or yellowish fur. Although these symptoms almost always occur, we sometimes meet with cases in which they are but slightly marked. If the child be young, a fit of convulsions may take place. I have generally observed this symptom occur within twelve or eighteen hours of the appearance of the eruption ; and when slight, and occurring thus early, generally augurs a benign description of the disease. At the end of the third, or beginning of the fourth day, from the first appearance of febrile symptoms, a

number of little red spots or pimples appear on the lips, face, neck, and chest, slightly raised above the level of the skin, which extend successively to the other parts of the body. On the appearance of the eruption, febrile symptoms generally either abate, or entirely disappear, but occasionally the fever runs on more or less for two or three days after its appearance. About the fifth or sixth day from the first accession of febrile symptoms, there appears at the top of each pimple a small transparent vesicle, filled with a clear fluid : these vesicles are slightly depressed in their centre. Suppuration will be completed about the eighth day, and the pustules will then be found to contain a thick yellowish matter. The patient will now complain of difficult deglutition, with hoarseness, and an increased secretion of saliva takes place, owing to the presence of pustules in the cavity of the mouth and fauces. Should the eruption be thickly scattered over the face, it will at this period of the disease become much swollen, and the eyelids will be entirely closed. On or about the eleventh day, deglutition becomes easier, and swelling of the face, hands, and feet subsides, the pustules dry up, and fall off in

crusts or scabs, leaving the skin of a brownish colour, which disappears in a few days.

Treatment.

For the cure of this disease, a pure and healthy air are almost indispensable, and during the eruptive fever, an antiphlogistic regimen should be directed, and acidulous drinks given. An occasional dose of calomel combined with jalap should be directed to keep up the action of the bowels: the same plan must be persisted in during the appearance of the eruption. Should it be slow in appearing, the warm bath will tend to bring it forward; and if convulsions occur, the bath may be still useful; but if it have not the desired effect, we must not hesitate in applying leeches behind the ears or to the temples, with the view of unloading the vessels; and indeed, should symptoms of congestion or inflammation show themselves in any part, the use of the lancet becomes indispensable.

Where the child is of a strong and healthy constitution, the exhibition of an emetic will often do good by lessening the irritation of the stomach, while at the same time it encourages perspiration.

If the eruption suddenly disappear, it will be necessary to apply mustard sinapisms and blisters; and should the strength seem exhausted, we must exhibit wine, bark, ammonia, &c.

CONFLUENT SMALL POX.

In this form, the violence of the fever in the eruptive stage is generally much greater than in the distinct. The symptoms begin with shivering, great heat, nausea, vomiting, thirst, anxiety, quick pulse, occasionally violent convulsions, which generally augur a bad state of the disease, and sometimes the child will die before, or immediately upon the appearance of the eruption, which takes place on the second or third, and in some instances on the first day. When it appears thus early, the disease is much more likely to prove fatal.

Before the development of the pimples, the skin sometimes assumes an efflorescence much resembling the measles, the fever seldom abates, and in most cases becomes more violent, probably assuming the typhoid type. The face being thickly

covered with the eruption, is very much swollen, as are the eyelids, so that the patient is unable to open them. The child will be attacked by an obstinate diarrhœa, which will very often run on through the whole course of the disease. In adults, salivation takes place on the second or third day of the eruption. The saliva is in the first instance clear and abundant, and is readily expectorated. About the tenth or eleventh day it becomes thicker, and is brought up with considerable difficulty. Salivation will often cease at this time, and should not some favourable crisis take place, the patient becomes suffocated. The pimples differ from those in the distinct form, as they are small and flatter, rising but little above the surface. They are much more numerous on the face: they intermingle or run into each other. The vesicles generally appear sooner: they do not suppurate properly, the matter assuming a brownish colour instead of a thick and yellow appearance. According to most authors, a tenderness of the skin may be considered a favourable omen in the small pox, while effusion of blood in the pustules must be looked upon as an alarming symptom. About the eleventh day, should the disease have taken a favourable turn, the swelling of

the face abates, and the hands and feet begin to swell. Black or brownish crusts are formed about this time, from the bursting of the vesicles. As the scabs fall off, they leave indelible pits or scars.

Should the constitution be unable to cope with the disease, from its great virulence, or from the accession of secondary fever, which takes place at the period of maturation, the patient will sink under the accumulation of the miseries attending this loathsome disease, and generally expires about the eleventh day from the first commencement of pyrexial symptoms, or shortly after.

Treatment.

The treatment in this variety of the disease being similar to that already pointed out for the distinct form, it would be unnecessary for me to refer to it again. However we must bear in mind, that there is a great tendency to its assuming a typhoid type, which generally takes place during the period of maturation; in which case it will be necessary to support the powers of the constitution by tonics, for which purpose we may give wine, the decoction

of bark with vitriolic or muriatic acid; but should the symptoms gain ground rapidly, the pustules appear flattened on the surface, the strength visibly sink, and the pulse flag, stimulants must be exhibited, such as ammonia, quinine, wine, camphor, &c., while mustard sinapisms or blisters should be applied to the extremities. We must be careful in stopping diarrhœa; and unless the exhaustion or debility be great, it should not be interfered with; but if the symptoms indicate the propriety of stopping it, the chalk mixture with a small quantity of laudanum may be given. On the contrary, if a state of constipation exists, small doses of calomel with laxative clysters may be directed.

Upon examination after death, it would appear that this disease never attacks any of the internal parts, but the mouth, larynx, trachea, and nose, are by no means exempt. The vagina and urethra are not susceptible of its effects. The brain and abdominal viscera are generally found in a healthy state, but the respiratory apparatus is not unfrequently found to exhibit marks of inflammation, particularly if the disease has been slow in its progress. M. le Doc-

teur Ouvrard* mentions having found papulæ in the duodenum, some of which were depressed on their summits; they were likewise found in the jejunum and colon; in the latter they were larger and more elevated; and in the rectum they were so numerous as nearly to touch each other. However Dr. G. Gregory, whose extensive researches and information on this subject cannot be doubted, has never in a single instance traced pustules on any of the viscera or cavities of the body.

* Dictionnaire des Sciences Medicales, vol. lvii.

VACCINATION.

THOUGH vaccination seems to have been known and practised in certain parts of the country for some years before Dr. Jenner made his discoveries public, it is entirely owing to his perseverance and judgment that we are indebted for the general introduction of it as a preventive of small pox. In what manner the vaccine matter acts is still a mystery; but it is certain that it does produce such a change in the constitution as to guarantee it against small pox; or, should it occur, to modify or render it comparatively of a mild form.

Though vaccination has not yet arrived at perfection, it has done much towards the extirpation of small pox; but great improvements may still be made to render its effects more certain. Unfortunately no test has as yet been discovered to ascertain whether it will act as a certain preventive,

for it is not always infallible in its effects, even when the disease has run through its regular periods. But I believe much may be done by attending carefully to the appearance and progress of the disease as they occur.

The early occurrence of scarlatina, measles, chicken pox, or fever of a contagious character after vaccination, unfits the constitution for the reception of the virus; and if it produce any effect, the progress of vesication and of the areola will be found irregular. Should the child be affected with any chronic cutaneous disease, the operation must be deferred, as the result must always be imperfect and uncertain. In some cases the vesicle will run its course without any appearance of areola; in others, on the contrary, the vesicle will be of a small and irregular form, while the areola will be very extensive. In any of the above mentioned cases, the propriety of re-vaccination is indisputable.

I shall now proceed to give the appearances and progress of the disease as they ought to occur, as being the most likely to ensure the patient against the small pox; a deviation from which, however trifling, will always, in my opinion, lessen the preventive power of vaccination.

The effects produced by vaccination on the constitution are generally very trifling. I consider it important, when practicable, to take the lymph from the arm, and insert it immediately under the cuticle of the one to be inoculated, and three or four punctures should be made in each arm. After the lymph has been carefully inserted, in the course of the second day a very small red spot may be observed, which, if examined carefully through a magnifying glass, will be found vesicular; on the third day, the spot will be increased in size; on the fourth, it will be still more apparent; and on the fifth, or at the furthest the sixth day from the insertion of the virus, the vesicle will have become perfectly distinct, containing a transparent fluid, which is capable of propagating the disease. On the seventh day, it is manifestly larger, from the increased secretion of lymph. On the eighth, a hard or inflamed areola, varying from one to two inches in diameter, will be observed to form round the vesicle; and about this time it will not be uncommon to observe slight febrile action, which will sometimes continue for two or three days, but this is not an invariable, nor, in my opinion, a necessary concomitant. When constitu-

tional symptoms occur in very young children during the progress of this disease, I believe they should in many cases be attributed more to teething, or to functional disorder of the stomach, bowels, &c. than to any specific effects produced by the virus. I know it is the opinion of some, that such symptoms are necessary; but I would ask why it should be so amongst children, when adults are seldom if ever affected constitutionally? Hitherto, the vesicle has been depressed in the centre, with an uneven surface; but on the ninth or tenth day, it will appear more even, and sometimes the centre will be the most prominent part. The vesicle will assume a circular form, and be of an opaque pearly colour; the inflamed margin or areola will be at its height, and after that period will begin to fade. About the eleventh or twelfth day, the centre of the vesicle will become of a brownish colour, the areola will be much less distinct, and in a few days will entirely disappear. A hard, round, brownish scab will then be formed by the concretion of the lymph, which will afterwards have a blackish appearance; and if not accidentally picked off, will generally become detached in the course of a week or ten days,

the surface which it occupied exhibiting a round indented scar.

It cannot be doubted, as I have before observed, that small pox may occur after vaccination ; but hasty conclusions should not be drawn from a few anomalous or insulated cases, perhaps one out of several hundreds : but such instances form no well grounded objection to the use of vaccination, which has been productive of more benefit to mankind than any previous discovery.

VARICELLA, OR CHICKEN POX.

THE chicken pox is usually ushered in by slight symptoms of pyrexia, but they are occasionally so trifling as scarcely to denote indisposition, and usually terminate in from twelve to thirty-six hours; small red pimples then appear resembling the small pox; they extend over the body, and are generally more abundant on the trunk: they are on their first appearance of a reddish colour. A small bladder will soon be observed on the top of each, containing a watery or yellowish serous fluid, which, if not burst by rubbing, the itching sometimes being intolerable, becomes thick and absorbed, leaving a thin scab. Suppuration but seldom takes place, and in the course of five or six days, or a week, the scabs or scales drop off, leaving no scar or mark.

This complaint almost always attacks children,

adults being seldom the subjects of it. I think it is generally more prevalent during the spring months. It seldom, if ever, attacks an individual more than once, nor is it a disease attended with danger. Occasional errors have arisen from the circumstance of this disease having been mistaken for the small pox. However, by possessing a correct idea of the characteristic appearances and symptoms peculiar to both, such mistakes may be prevented.

In the chicken pox the fever is trifling, seldom lasting longer than a day or two, ushered in with little shivering: in the majority of cases this symptom is absent altogether. In small pox the fever runs high, and comes on with universal lassitude, sickness, and shivering; the fever probably lasting for some days. The eruption in varicella is nearly from the commencement vesicular, while the vesicular form of the small pox is apparently papular for a day or two. When the vesicle comes to maturity, no tubercular base will be observed, but the small pox vesicle will be found raised on a tubercular base in the first instance.

Treatment.

The treatment of this disease is very simple. An occasional cooling purge should be given; while cold ablution will be found to lessen heat and irritation of the skin, should they be present. A light diet should be ordered; but, if symptoms of pyrexia run high, those remedies which determine to the surface must be likewise directed.

URTICARIA, OR NETTLE-RASH.

DIFFERENT varieties of this disease have been described, but I shall only notice that species of the complaint to which infants or young children are most subject. The little patient will be found to labour under febrile symptoms, varying in intensity, accompanied with nausea or sickness : sometimes he appears heavy and inactive, and refuses his food. After the continuance of these symptoms for two or three days, the eruption appears in irregular patches, and has acquired its name from its similitude to the appearance produced on the skin by the stinging of nettles. It is attended with itching, which towards night increases, and sometimes becomes intolerable. Upon the child's rubbing the skin, it will sometimes appear instantaneously. This disease varies very much in its continuance, from a few minutes to hours or days, the periods of its re-appearance

being more or less uncertain. Wheals are generally observed on different parts of the body, particularly on the thighs and arms. On the appearance of the eruption, the nausea or vomiting frequently abates, or entirely ceases; but during the intervals, the patient is again annoyed by the recurrence of these symptoms.

This disease would seem generally to proceed from a disordered state of stomach, arising from the presence of acidity, or any crude, indigestible substance, which I think accounts satisfactorily for its greater prevalence during the summer, at which season children are too frequently indulged in the indiscriminate use of fruit. It will also occur during dentition, but I have never known a child to be attacked by it before that period. The nettle-rash generally runs its course in a week or ten days from the commencement of the fever preceding the eruption, and terminates in the falling off of small scales.

Treatment.

In slight cases of febrile nettle-rash, two or three brisk purges will generally suffice; for which purpose a grain or two of calomel should be given,

followed by a draught of the sulphate of magnesia in the infusion of roses or rhubarb, or infusion of senna and the tartrate of potash dissolved in one of the distilled waters. However, if the nausea or vomiting be troublesome, indicating the presence of offending matter, an emetic of ipecacuanha should precede the above, of course varying the dose according to the age of the child.

The tepid bath has been recommend in urticaria, but I have generally found it aggravate the itching in infants; though in children more advanced in age, it may often be used with advantage. A weak spirituous lotion will sometimes be found useful in allaying this irritation. In one instance that fell under my observation, the irritation of the skin was so great, that nothing would alleviate the itching, but a wash composed of decoction and extract of poppies, the soothing effects of which were speedy and decisive. The child should be kept cool, and on an antiphlogistic regimen.

RUBEOLA, OR MEASLES.

It would appear that neither Hippocrates nor Galen, nor indeed any of the ancient authors, have made mention of this disease, and it was either unknown or undescribed till the ninth century, when Rhazes, an Arabian physician, described it. It did not make its way into Europe till about the time of the crusades, towards the end of the eleventh century ; and as the small pox made its appearance about the same period, it was supposed to be a milder form of the latter disease. It is to Sydenham that we are indebted for a more rational mode of treatment, than had been hitherto adopted ; and indeed, since his time, we have advanced very little further towards a more correct knowledge of this disease, either as to its causes or its treatment.

Measles is not confined to any climate, though it is more severe in very cold, or very hot,

than in temperate countries; and is generally most prevalent during the winter months. Though upon referring to Sydenham, it appears that the epidemics of which he gives so excellent a description, began in the spring and lasted till the middle of summer. Morton and others have likewise described epidemics, which raged during the summer.

This disease begins by the patient complaining of heaviness and giddiness, swelling of the eyelids, great heat and redness in the eyes, which cannot bear the stimulus of light, and discharge tears of an acrid nature; sneezing, accompanied by a serous discharge from the nostrils, and hoarseness. Febrile symptoms, with hoarse dry cough, make their appearance, with pain in the small of the back, nausea or vomiting, slight soreness of the throat, sometimes accompanied with constipation, but not unfrequently with diarrhœa, which latter symptom sometimes proves very obstinate. The pulse is quick, the tongue foul, and slight delirium is not uncommon. These are the most usual preludes to measles, though, in different patients, they will be found to vary in intensity. Three or four days, and occasionally a week may elapse from the appearance of these symp-

toms, when small red spots, which have been accurately compared to flea-bites, will be observed, first on the forehead and face, then extending to the neck, chest, trunk, and extremities. As these papulæ increase in size and number, they form into irregular clusters of a crimson colour, and are generally smaller on the face than on any other part, though sometimes the contrary is the case. Upon drawing the finger over them they will be found just to rise sensibly above the surface of the skin.

The precursory symptoms are but little alleviated upon the appearance of the eruption, and in some instances are decidedly aggravated, particularly the headache, heaviness, cough, and febrile symptoms, but very generally the nausea and sickness are lessened. The difficulty of breathing and other symptoms remain with unabated violence. In some instances nasal hæmorrhage, in others a vomiting of bilious matter, or profuse perspiration will take place, which will frequently prove beneficial.

About the third or fourth day after the appearance of the eruption, the redness on the face begins to lessen. The skin assumes a brownish colour, and falls off in small mealy scales. In a few days the papulæ

on the rest of the body disappear in the same way. During this process of desquamation, the itching is generally very troublesome. The slight discoloration of the skin rapidly disappears. Sydenham and others mention cases, in which desquamation did not take place, the measles disappearing on the occurrence of diarrhœa, perspiration, or an increased flow of saliva. During the disappearance of the eruption, the difficult breathing, cough, coryza, ophthalmia, and febrile irritation, sometimes increase.

Though the measles, as a cutaneous disease, is of trifling importance, yet the complications attending it, and the continued disposition to an inflammatory state of the respiratory organs which it leaves behind, generally render the consequences of this disease of a much more formidable and dangerous nature.

A retrocession of the eruption should be guarded against, as in such cases, delirium, difficulty of breathing, extreme debility, pains in the chest, a pallid or livid colour of the pimples, an intermittent pulse, and convulsions in young children may occur, and finally terminate in death.

The re-occurrence of measles in the same person has long been a subject of discussion. Many

names of eminence have been ranked on both sides ; but in my opinion it can no longer be a matter of doubt, as it has been attested by such well authenticated cases. The late Dr. Baillie met with seven instances, out of which five were brothers and sisters, which induces Dr. Mason Good to suppose that there must have been a susceptibility in that family to contract the disease, as the fifth was affected by it the second time, after an interval of twenty-one years. This appears a very fair and plausible deduction. I met with an instance a few years ago in the family of a surgeon of eminence, in which there was a decided re-occurrence. A young lady, while on a visit there, contracted the disease, and after an interval of a few days, one of the daughters, with whom she was in the habit of sleeping, was likewise attacked by it. In these cases, I can vouch for both parties having had the disease before ; but doubtless a re-occurrence is by no means frequent. Instances have been recorded of this disease having been communicated to the foetus, when the mother was labouring under it. Should the constitution be under the influence of the contagion of measles at the time the variolic matter is inserted, the action of the small pox is retarded, till

the original disease (the measles) has run through its course : after which the variolous disease makes its appearance, and is generally of the mild kind.

Neither age nor sex are exempt from the contagion of measles ; but children, from the period of weaning to the age of puberty, are mostly the subjects of it. After that time, the older the patient is, the more troublesome and dangerous the disease generally proves. I have heard it asserted that it is more fatal among males than females, but I do not think this opinion borne out by observation ; for if there be any difference, I should rather be inclined to assert the contrary ; as females, from their greater delicacy of constitution, and their greater susceptibility to contract inflammatory phthisical affections, would naturally seem more prone to suffer from the consequences of this disease. Dr. Home made several experiments to ascertain whether measles was susceptible of communication by inoculation. It does not appear that his results were satisfactory, for even in those instances in which he appeared to be successful in communicating the disease, the usual symptoms were not in any way mitigated.

Treatment.

The antiphlogistic regimen should be adhered to, a moderate temperature maintained, the bowels kept sufficiently open, and cooling and slightly diuretic drinks given. Saline diaphoretics may likewise be directed. Should the stomach be in an irritable state, a gentle emetic may be given with advantage. In an ordinary attack of measles, this is the only treatment necessary.

Much has been said as to the propriety of bleeding in this disease. Morton recommends it upon the completion of the eruption ; while Cullen was an advocate for it in every stage. In my opinion, it is an unnecessary precaution, and an error in practice, to lay down bleeding as a general rule in any stage of measles, unless there should be an accession of inflammatory symptoms, in which case bleeding, either general or local, should be had recourse to, to meet the exigencies of the symptoms. Should pneumonic symptoms become urgent, we must, without regard to any particular stage of the disease, or period of the eruption, employ local and general bleeding, with purging and nauseating doses of antimony or ipecacuanha. If the symptoms be not

relieved, the bleeding should be repeated, and followed by the application of a blister: in fact, the treatment must then be similar in every respect to that indicated in pneumonia.

Regarding blisters, I may here remark, that in those cases in which the presence of pneumonic symptoms called for their application, I have always found them of singular efficacy, and agree with the experienced and talented Gardien, who recommends them upon the slightest appearance of affections of the chest; but should the inflammation run high, it is always advisable to delay their application till the symptoms have been partly subdued. When diarrhœa exists in any stage of the disease, we must be cautious in checking it; particularly when it takes place towards the period of resolution, as it mostly augurs a salutary crisis; however, should it produce extreme exhaustion, astringents become necessary, such as chalk mixture with aromatic confection. Should this not prove sufficiently efficacious, other astringents may be exhibited, such as catechu, combined with the chalk mixture, and perhaps a little laudanum. Astringent injections may be likewise thrown up.

If retrocession of the eruption take place, our

object should be to bring it back, for which purpose the warm bath must be had recourse to immediately ; a blister should be applied to the chest, and cataplasms of mustard and vinegar to the feet ; and from time to time, a little spiced wine and water may be administered.

During convalescence, it is of the greatest importance to guard against the effects of cold, as it may act as an excitant to phthisis, particularly where a disposition to that disease already exists.

SCARLATINA.

It would appear that this disease is comparatively of modern origin; not being mentioned in the works of any of the ancients. The first description that was given of it, was by Coyttar, a French physician, about two hundred and fifty years ago. It is of a contagious character, and appears most frequently as an epidemic, after a hot damp summer: however, it may rage at any season of the year. It attacks both sexes indiscriminately. Adults may be the subjects of it, though it is, generally speaking, a disease of childhood. It seldom occurs to the same individual more than once, but there can be no doubt that there are occasional instances of its recurrence, sometimes after a considerable interval of time.

As it has been usual to divide scarlatina into three varieties, I have adhered to the same plan,

though I think it a useless division, as I consider that the two last varieties so frequently merge into each other, as to form but one and the same disease. I shall now proceed to describe scarlatina simplex, scarlatina anginosa, and scarlatina maligna.

SCARLATINA SIMPLEX.

This form of the disease is preceded by slight febrile symptoms, which continue till the next day, when numerous red points appear on the face and neck, which, in the course of twenty-four hours, are extended all over the body. As they increase in number, they form small stains, or patches. On the third day they produce a general efflorescence over the limbs, in which the trunk does not always participate, as intervals may be observed between the patches. This efflorescence will sometimes diffuse itself over the interior of the mouth, fauces, and nose; the tongue will be nearly covered with a whitish fur, the edges appearing quite clean, while the elongated papillæ appear on its centre: the pulse will be found quick, delirium may occur,

and, in young children, convulsions, either before the appearance of the efflorescence, or in the course of the disease. The eruption is more vivid towards evening; the heat of the skin (particularly on the chest and extremities) will be much increased, it will be rough, and sometimes very sensible to the touch: occasionally small papillæ may be observed on these parts. On the fourth day we may consider the disease at its height, for on the following day the eruption begins to disappear, and by the close of the seventh, has entirely vanished. Desquamation then takes place, and in the course of four or five days the cuticle peels off in branny or scurfy scales. I have given the symptoms of the mild or benign scarlatina as they usually appear; but sometimes the efflorescence is neither preceded nor attended by febrile action, and the patient experiences little or no inconvenience from the disease.

Treatment.

In the treatment of this simple form of scarlatina, it will merely be necessary to keep up a gentle action on the bowels, for which purpose the occasional exhibition of a little calomel and rhubarb, followed by

a draught of the tartrate of potash or the sulphate of magnesia in the infusion of senna or roses should be directed.

The room should be kept cool and well ventilated, and the patient restricted to the antiphlogistic regimen. I have often observed in children of a gross or full habit, that previous to, and sometimes shortly after the appearance of the eruption, nausea or sickness will occur. Should these symptoms prove troublesome, a mild emetic will be indicated.

SCARLATINA WITH SORE THROAT.

This is decidedly the most frequent variety of the disease. The precursory symptoms are much more violent than in the mild form, and consist in a sensation of lassitude and dejection, with headache, shivering with alternate flushes of heat; and from a painful sensation in the throat, deglutition is performed with difficulty. Should the patient be troubled with cough, the breathing may become difficult, and suffocation threatened if the child be young. The thirst is sometimes great, and

the patient is troubled with nausea and vomiting. The heat of the skin is always more or less intense; the pulse is quick; the tongue sometimes appears very red, and the papillæ will be found elongated. Slight delirium is not uncommon; and in young children convulsions may occur. These symptoms increase in violence till the period of eruption, which takes place early on the third day. The skin is then tumefied, and of a more vivid colour; the patient complains of a sensation of itching, and the skin is sometimes very sensible to the touch, particularly on the hands and feet. The face, neck, and chest are covered with large, red spots, which in a short time become general, producing a deep efflorescence, which assumes the appearance of scarlet stains or patches. Upon pressure, the redness disappears, and returns on its removal. The surface of the mucous membrane lining the lips, the cavity of the mouth and fauces, partakes of the redness, accompanied with considerable swelling. When this latter symptom is great, the difficulty of breathing is sometimes alarming. At this period of the disease, the tongue is often coated with a whitish or yellowish fur; an accumulation of thick viscid mucus takes place,

adding considerably to the dyspnœa; and small specks are sometimes to be seen, which have been compared to the sloughs in cynanche maligna. However, they may, in most cases, be readily removed, as ulceration in these parts is not of frequent occurrence; but when it does take place, the lassitude and restlessness are great, and the breath will be offensive. From this time to the sixth day, the intense redness gradually lessens, and the skin assumes a brownish colour, the accompanying symptoms disappearing with the eruption. By the end of the seventh day, the disease seems to have run through its course. The skin then becomes rough, and desquamation of the cuticle takes place in small mealy scales; but from the hands and feet, the exfoliations are in larger pieces. During the progress of desquamation, which varies in duration from ten days to a fortnight, the skin is very sensible and the itching troublesome.

Treatment.

There is no case in which emetics can be more judiciously used than in this form of the disease, though at the same time I strongly object to their

indiscriminate employment. I cannot help thinking that the practice recommended by Dr. Withering, of the exhibition of emetics every forty-eight, and in urgent cases every twelve hours, if adopted, would be very generally productive of prejudicial effects. During the precursory fever, the exhibition of an emetic should not be neglected, as it not only empties the stomach, which is often in a foul and disordered state, but by producing diaphoresis, by which the surface becomes relaxed, the dryness and heat of the skin are abated, and most probably the intensity of the subsequent disease will be mitigated. This should be followed by a brisk purgative of calomel and jalap, or scammony. Calomel seems particularly applicable as a purgative, as its operation tends materially to lessen the disposition that exists to congestion or inflammation. After the bowels have been thoroughly cleansed, occasional doses of calomel should be given, to keep up a free action on the intestinal canal, taking care not to affect the mouth.

I have very frequently found the exhibition of diaphoretics, particularly antimonials, when administered early in this disease, not only fail in pro-

ducing the desired effects, but give rise to a restless anxiety and an increase of fever, and in a few instances to diarrhœa.

Much has been said of the efficacy of the cold affusion, the good effects of which cannot be doubted ; but it should be employed with discretion, particularly in young or delicate children ; as I have occasionally seen the eruption suddenly recede, and produce the most alarming cerebral and gastric excitement : on such occasions the warm bath should be employed. In very young subjects I therefore prefer spunging the body with cold water ; but where its application in any form produces chilliness and lassitude, it should be immediately discontinued. Where the cold affusion is not contra-indicated by age and constitution, it will be found a most invaluable remedy : so highly do I think of it, that I believe the well-timed use of it, with the proper exhibition of purgatives, will in most cases be attended with the most marked and beneficial effects. After its application, the inordinate heat and other symptoms are relieved, and the patient will probably fall into a calm and comfortable sleep. Preparatory to the use of the cold affusion, the patient must be stripped and placed

in an empty bath or tub, a pail of water is then to be suddenly poured over the head, after which he should be thoroughly dried and replaced in his bed.

Where the headache is great, threatening congestion, leeches should be applied to the temples; they should likewise be employed where the swelling and inflammation of the throat are urgent. When we find these symptoms violent early in the disease, and local bleeding has been employed without success, we should not hesitate in judiciously using the lancet, as we are always warranted in having recourse to those means most likely to relieve the predominant symptoms, whatever they may be.

Where the throat is swollen and inflamed, and deglutition much impeded, a small blister laid across the external fauces will be found beneficial; and may, in general, be applied with safety in any stage of the disease. Gargles will often be useful, and where the patient is too young to make use of them, a syringe may be advantageously employed for the purpose. A very simple and efficacious gargle may be formed by the mixture of muriatic acid or the tincture of capsicum in barley water. During this disease, the antiphlogistic regimen should be adopted, cool and slightly acidulated

drinks directed, while an equalized temperature should be kept up in the apartment.

Occasionally during convalescence, or after that period, an œdematous state of the lower extremities takes place, with symptoms of debility and want of appetite, constipation, a quick pulse, and very generally a scanty secretion of urine. I have mostly been successful in removing these symptoms by the exhibition of brisk purgatives, with small doses of digitalis, which should be given in the form of infusion, at the same time carefully watching its effects. The diet should consist of that description of food most easily digested. I have often found change of air contribute greatly to the cure. Another occasional unpleasant result of this disease, is a tumid and sometimes painful state of the salivary glands. In other instances a temporary or permanent deafness takes place, in consequence of an inflammatory state of the Eustachian tube; while in some cases the respiratory apparatus is left in an extremely weak and susceptible state, and bronchitis or pneumonia may supervene.

SCARLATINA MALIGNA, OR MALIGNANT SCARLET FEVER.

The symptoms preceding this form of the disease are similar to those of scarlatina anginosa; it will therefore be unnecessary for me to recapitulate them. The appearance of the eruption varies from the second to the fourth day, and is of a less deep colour than in the preceding varieties, with the exception of a few patches, the efflorescence ultimately assuming a darkened or purple hue. There is a peculiarity attending this eruption: I allude to the circumstance of its occasionally receding soon after its first appearance, sometimes for a few hours, at others, for two or three days or longer. The pulse is small, weak, and sometimes indistinct; the patient is irritable; the heat of the skin great, but varying in intensity; the eyes are heavy and inexpressive, and injected, as it were, with blood; the mouth, tongue, and teeth are covered with a brown or blackish coat, and the breath is highly offensive; the cheeks participate in the general efflorescence, and assume a particularly livid red hue; a state of delirium or coma is not unfrequent; the breathing is rendered difficult and laborious from the cir-

cumstance of the fauces being partially clogged up by the accumulation of phlegm, and deglutition is performed with pain and difficulty; sloughs are formed in the throat and adjacent parts, surrounded by a dark red or purple base; a discharge of acrid fluid escapes from the nostrils, which assume a highly inflamed appearance; the smell of this secretion is sometimes offensive; it excoriates the upper lip, often producing little sores or blisters.

Treatment.

In the treatment and management of this disease, we must be entirely guided by the nature of the symptoms; in fact, it would be difficult to lay down an accurate and general plan of treatment, as much must depend on the discrimination and experience of the practitioner, in watching symptoms as they occur, and in speedily applying the appropriate remedies. Should those of inflammation exist during the stage of excitement, recourse must be had to the depletory remedies pointed out for the last species, however bearing in mind the great disposition there is to putrescency, and depression of the vital energy.

When scarlatina assumes the malignant form, it

is of so dangerous a character, as to require the most prompt and decisive measures. The operation of an emetic will be found to lessen the difficulty of breathing, by partially removing the accumulation of mucus; it should therefore be the first step taken, which must be followed by a full dose of calomel and a saline aperient. I think it of consequence to let the emetic precede the purgative, as the acrid nature of the mucus, if swallowed, will often produce great irritation along the course of the intestinal canal, sometimes producing inflammation of the mucous membrane; and in young children will frequently occasion obstinate diarrhœa.

Should the skin be hot and dry, spunging the body with vinegar and water will generally give considerable relief—on the other hand, if the circulation on the surface be languid, the application of warm vinegar and water should be directed. To assist in lessening the viscid mucus in the fauces, acidulated astringent gargles should be repeatedly used, for which purpose we may employ the decoction of bark with muriatic acid, or infusion of roses, with an increased quantity of sulphuric acid, and a little of the tincture of myrrh, barley water with capsicum, or an infusion of capsicum with vinegar

and water. A solution of chlorine in water will be found a useful application. If the child be so young as to be incapable of using a gargle, it should be injected with a syringe. In those cases where the gargles do not sufficiently assist in removing the phlegm, and symptoms of suffocation are threatened, the propriety of exhibiting a gentle emetic of ipecacuanha cannot be questioned.

To promote the separation of the sloughs, they may be stimulated with camphorated spirit of wine, or a weak solution of the sulphate of copper. Much has been said of the efficacy of bark in the malignant form of this disease; and, from my experience of its effects, I should say it ought never to be given when symptoms of delirium run high, as in such cases I have always found it increase that distressing state by repressing diaphoresis, and increasing fever and general restlessness. I have found a draught of ammonia and aromatic confectio with camphor mixture a very efficacious combination; it may be given every two or three hours, or more frequently, according to the urgency of the symptoms; this will not only act as a grateful stimulant, but will, at the same time, promote the separation of the sloughs. Port wine will sometimes be found advantageous; but should it cause

an increase of heat and restlessness, which it frequently does in young children, it should not be allowed. I have sometimes found the exhibition of small doses of Dover's powder highly beneficial by its producing moisture on the skin; and should the bowels not be sufficiently active, calomel may be advantageously combined with it. A little draught composed of camphor mixture and the spirit of sulphuric æther may be given after each dose; it will be found to modify the effects of the opium in the Dover's powder. The delirium will be abated, and the general irritation calmed. A draught composed of the infusions of serpentaria and capsicum, with a few drops of the compound spirit of ammonia, is another useful form.

We should be careful in not administering wine, bark, ammonia, acids, cordials, &c. till symptoms of malignancy show themselves, when the constitutional powers should be supported, and a light and nutritive diet directed. Should deglutition become so difficult as to render the child incapable of swallowing, nourishing clysters should be thrown up.

Fumigations have been recommended, and as they are sometimes of great use, should not be neglected. The nitric acid gas, produced by the

mixture of sulphuric acid and nitre, is as good as any we can employ; but I cannot agree with Dr. Bateman, that they will often render the use of gargles unnecessary. Should the swelling of the fauces be so alarming as to interfere materially with the respiration and deglutition, a small blister may be applied with safety across the throat. I have repeatedly ordered them in such cases, with the happiest effects. I am aware that sloughing may occasionally arise from their application in young children; but this may be obviated by the removal of the blister as soon as slightly inflamed surface is produced. I most decidedly object to the application of blisters to the head; for, as far as my experience goes, I should say, that an increase of delirium and other alarming symptoms of irritation are almost always the result of their application to that part; but the tartar emetic plaster is not subject to the same objection, as it will sometimes be found to lessen cerebral excitement, and may be applied to the head, which should be previously shaved, or to the nape of the neck.

The occurrence of diarrhœa is an unfavourable symptom, particularly when it takes place towards the close of the disease; it should be immediately

suppressed by the chalk mixture and catechu, or a little laudanum. Astringent opiate clysters should never be neglected; and indeed where deglutition is nearly impossible, this is the only way in which astringents can be exhibited. I have known this disease prove fatal in a short time from the occurrence of diarrhœa, or a discharge of blood from the bowels; therefore when either of these occur at a late period in this disease, our prognosis must be most guardedly given. There are other symptoms which must make our opinion as to the result still doubtful. I allude to the early appearance of the eruption, the efflorescence appearing general and universal, and not in patches, with great and continued prostration of strength.

Throughout the course of this disease, the apartment should be kept well ventilated, and a frequent current of cool and fresh air admitted. The linen should be frequently changed, and care taken to remove the evacuations, which are often highly offensive. During convalescence, the prudent administration of wine, or light tonics with some of the mineral acids, will be proper, with change of air, regular exercise, and a nutritious diet.

As the contagion of scarlatina is so quickly pro-

pagated among children, it behoves us to separate the unaffected from those infected without loss of time. In large establishments, or schools, the propriety of this measure is evident. After convalescence the apartments require thorough ventilation, with fumigations of nitrous or oxygenated muriatic acid. The clothes and linen should likewise be fumigated and washed. It would appear that this disease is capable of being propagated as long as exfoliation of the cuticle continues; therefore, till this process is entirely completed, the children should be kept apart.

INFANTILE REMITTENT FEVER,

AND

MARASMUS.

THE foundation of this disease is frequently laid soon after weaning, by giving the child food which his stomach cannot digest, by overloading that organ, or by going into the other extreme, and not giving a sufficiency. During tedious and painful dentition, it sometimes occurs. Worms are considered by some as frequently giving rise to this fever; but I cannot hold with this opinion, as I have in very few cases discovered worms in my post mortem examinations of those who have died of the disease. A writer* who has given us some excellent practical remarks on this disease, and indeed who has the credit of having been the first who accurately described it, says, "Worms are nature's remedy for destroying the superabounding morbid

* A Treatise on the Infantile Remittent Fever, by W. Butter, M. D. page 35.

humours; and for stimulating the first passages by their crawling motions, and thereby assisting the peristaltic motion of the guts to carry off what remains of the offending load." However, few will agree with him on this point, for that worms are an occasional cause of much derangement in the animal economy, no practical man will doubt, but certainly not so frequently as is generally supposed.

I consider a bad air and uncleanness, as powerful excitants; in fact, any cause tending to weaken the digestive functions, or to give rise to nervous irritability, may produce infantile remittent fever.

In the commencement of this disease, the child will be found to have slight febrile accessions during the day, generally accompanied by drowsiness: the bowels are mostly in a constipated state, but sometimes the contrary is the case. The motions are almost always highly offensive, of an unhealthy appearance, and are often of a clay colour, from an insufficiency of the biliary secretion. The appetite is generally much impaired, sometimes entirely absent, while in some instances it is voracious. The pulse will be found quick, averaging one hundred and twenty in a minute; the appearance of the tongue is at first clean, but soon exhibits a foul

appearance. Some children, during the intervals of the febrile accessions, would seem to have regained their usual health and vivacity, while others are fractious and irritable throughout, often awaking suddenly from a restless and uneasy sleep. In the course of a week or ten days (or in some cases a much longer interval may elapse) the fever, which was at first comparatively slight, becomes constant and severe ; the face is alternately pale and flushed, the pulse sometimes acquiring an extraordinary quickness ; the skin is in a dry, parched state ; the fever will be found to increase during the night ; and the pulse will rise to 140 or 150 in a minute ; the child will now be found remarkably uneasy and fretful, and will be observed to indulge very much in picking and biting the lips and fingers ; the breath will be found highly offensive, the appetite will entirely fail, while an insatiable thirst occasionally exists ; the food will sometimes be found to have passed in the same state in which it was swallowed, proving at once the weakened and irritable state of the stomach and bowels ; the result will be an insufficient formation of chyle, and the consequent stoppage of the necessary supply of this fluid to the blood ; the child becomes daily more

emaciated ; there is no disposition to move, the spirits are low and desponding, and the muscles of the arms and legs become flaccid and flabby. A short dry cough is not unusual during the day, which is succeeded at night by slight dyspnœa. The sleep is much disturbed, during which period, a grinding of the teeth is sometimes quite audible. Should the child not be weaned, the motions will be found of a green or brown colour, and are always offensive, while there is a diminished secretion of urine, which is generally of a high colour. He suffers from abdominal pain, which he expresses by drawing up his legs towards that part, and convulsions may occasionally occur. The abdomen will be found tumid and distended ; the fever continues unabated ; the evacuations sometimes at this stage of the disease resemble treacle, and I have seen them perfectly black ; the lips are of a vivid red colour, appear enlarged, and are by this time sore, and frequently bleed from the almost constant picking. In some cases, delirium takes place. The emaciation now becomes rapid, the face assumes a pale and cadaverous appearance, the eyes have a vacant expression, and are sunk in their sockets. At this period of the disease, a copious and obsti-

nate diarrhœa may occur, and abruptly terminate the patient's sufferings ; or the child may sink under extreme emaciation or exhaustion. In other instances, though the child may have suffered and become emaciated to a great extent from the intensity and long continuance of the disease, by the use of proper and appropriate remedies, recovery may be effected. However, where the constitutional powers are affected by any previous disease, or a scrofulous diathesis prevails, recovery will always be doubtful ; and in those cases where diseased or deranged structure is suspected, our prognosis must be given with great caution.

Infantile remittent fever is said sometimes to bear considerable analogy to hydrocephalus, but the diagnostics in my opinion are not often obscure.

The appearances after death vary. In those of a scrofulous disposition, the mesenteric glands will be often found enlarged and diseased ; at other times, an ulcerated state of the bowels will be detected, while tubercles and sometimes purulent matter are found in the lungs ; in other cases, it is not uncommon to find the intestines inflated with a quantity of highly foetid air, and not exhibiting and diseased appearance.

Treatment.

The functions of the primæ viæ being so generally concerned in the production of this complaint, our early attention should be directed to the restoration of their indispensable healthy action. The exhibition of a mild emetic of ipecacuanha will in most cases be indicated, more particularly where we suspect the presence of any crude, indigestible substance in the stomach. A full dose of calomel and jalap should follow, which will generally be found to bring away a quantity of unhealthy and offensive matter; small doses of calomel, with ipecacuanha, or the hydrargyrum cum creta, with ipecacuanha, should then be directed at bed-time, for a few nights, with the view of promoting a healthy secretion of bile. However, we must be careful in not pushing calomel too far, as an unnecessary continuance of its use will often be productive of a disordered formation of this fluid in children; we must therefore desist from its use, when a healthy action of the biliary apparatus is established, which I need not say will be indicated by the admixture or appearance of healthy bile in the evacuations. The combination of ipecacuanha

with the calomel should not be neglected, as it assists most materially in the promotion of healthy action. This plan will often strike at once at the root of the disease, by removing the cause which gives rise to the morbid irritability of the system.

The remarkably torpid state of the bowels that sometimes exists in children labouring under this disease is extraordinary. I have occasionally known the most powerful purgatives and clysters exhibited, without producing any effect for a considerable time. However, in inveterate cases, we may often succeed by the exhibition of aloes, which should be given not only by the mouth, but in the form of clyster. In two or three very obstinate cases of this description, I have found an enema composed of powdered aloes with the spirit of turpentine and infusion of senna, produce speedy and copious evacuations. After the bowels have been thoroughly acted upon, a few grains of calomel combined with a little rhubarb given at bed-time, and followed in the morning by a draught composed of infusion of senna with the tartrate of potash or the sulphate of magnesia and a drop of one of the essential oils, should be given occasionally.

In those cases where the irritability is considera-

ble, I have known great benefit derived from a draught consisting of the extract of henbane or hemlock with the nitrate of potash and a few drops of antimonial wine. Should there be symptoms of cerebral excitement, it will become necessary to take away blood, which however must be done with caution and a due regard to existing circumstances; and should delirium run high, it may be necessary to apply a blister to the nape of the neck, which will often be attended with beneficial results. If the child suffer much from abdominal pain or distension, a poppy fomentation will prove useful; but should this fail, the warm bath will often give relief, and indeed will always be found of essential service in allaying general irritation, by equalizing the circulation and producing gentle diaphoresis. To procure sleep, opiates in the form of injection should be preferred, particularly if the child be young, which will generally tranquillize and produce rest. In the treatment of infantile remittent fever, I perfectly agree with Dr. Butter, who was of opinion, that whatever the remedies employed may be, their effects are considerably assisted by "rest, quietness, and stillness." As soon as we succeed in allaying febrile excitement, we should have recourse to tonics, the

infusions of gentian, columba, or cascarilla for instance, with a light and nutritious diet. Where there is no cough or disposition to thoracic or glandular inflammation, I consider the *mistura ferri composita* or the steel wine in infusion of gentian, an invaluable compound. A powder composed of the carbonate of iron, powdered columba, and rhubarb, will be found a useful form. The sulphate of quinine is likewise an excellent remedy, and will generally be readily taken by children.

In those cases in which we have reason to suspect a diseased or enlarged state of the mesenteric glands to exist, the well-regulated use of calomel, with tonics and gentle friction over the abdomen night and morning, with occasional potations of milk and lime water, will be found highly advantageous, observing a strict adherence to those means best calculated to promote a regular and healthy action of the chylopoietic viscera. We should be careful in allowing that description of diet only, which is nutritious and readily digested; it should be given often, and in a small quantity at a time, and should consist principally of animal and farinaceous food.

From what has been said of this disease, it will

appear that our chief designs are to employ purgatives, so as to produce regular and sufficient action on the intestinal canal ; to produce a healthy state of the secretions by the exhibition of alteratives ; to exhibit saline medicines with the view of lessening fever, adding to them some of the mild narcotics when the irritation is great ; to ward off local inflammation by a cautious abstraction of blood ; to repair the strength of the digestive functions ; and where lymphatic obstructions exist, to remove them, and resolve the enlarged or indurated mesenteric glands.

ON SCROFULA.

SCROFULA is a disease seldom manifesting itself before the age of two or three years, and not often after that of puberty, after which period the disposition to it would seem to wear itself out. I do not hesitate to assert, as far as my observations go, that the subjects of scrofula are predisposed to it from birth. I can call to mind but few instances in which I have not been able to trace the scrofulous diathesis to one of the parents. However, it does not follow that the constitution of children born of scrofulous parents must necessarily be affected by it.

The disease is said sometimes to remain inactive for one, two, or sometimes three generations. When this is the case, in my opinion, the predisposition still exists, although it does not become manifested; which I think may be most generally attributed to

the care and attention paid to the health and management during childhood. Among the causes most frequently said to rouse this latent disposition into action, authors have enumerated, a close and confined air, uncleanness, a crude and indigestible diet, and according to some, the milk of a scrofulous nurse (Van Swieten in particular deprecates the use of it); the occurrence of scarlet fever, measles, or small pox; and a variable and damp atmosphere. I have little doubt that any of these may act as an exciting cause, but more particularly the last mentioned. In low and swampy situations, it is sometimes endemic. The effects of climate on this disease are often remarkable. In a variable and damp atmosphere, much exposure during an inclement season will often rouse the scrofulous disposition into action; while in those countries in which the constant temperature of the atmosphere is in the extreme of heat or cold, scrofula is by no means frequent. All those who have watched the progress of this disease, must have observed the gradual improvement which takes place as the summer advances, and how invariably the symptoms relapse on the approach of winter.

By carefully observing those symptoms which so

peculiarly characterize the scrofulous subject, and by pursuing those means which promote the general health, the disposition may be so far influenced as to prevent its producing any sensible effect. Scrofula being purely a disease of debility, any cause which tends to weaken the tone of the system, will be found to favour its appearance.

Scrofulous subjects are generally described as having light and fine hair, blue eyes, the pupils of which are dilated, the eye-lashes long, the complexion sometimes pale, more frequently florid, with a soft and flaccid state of the muscular fibre; the skin is thin and of a fair and delicate texture; the lips are full, particularly the upper one; the fingers are sometimes very long and broad at the ends; the abdomen is likewise enlarged, while the breath and fæces are often very offensive. In some instances the intellectual faculties are very precocious, and the memory very retentive; while in others, more particularly among the poorer classes, from neglect and frequently ill treatment, the contrary is the case. Although these symptoms are undoubtedly pathognomonic of scrofula, I by no means consider their presence necessary to constitute the disease, as I have occasionally seen cases fully developed without

their presence. On the other hand, I have never known them to exist where the disease has not ultimately manifested itself, unless great care has been taken to strengthen the general health during the first years of childhood.

I think it can scarcely be disputed that females are the most frequent subjects of this disease. When labouring under it, it is not uncommon for them to suffer from painful and difficult menstruation; and, as far as my observation leads me, I should say that the process of suppuration takes place more rapidly in them than in males. The glandular system is more particularly the seat of scrofulous disease: the absorbent glands of the mesentery, the neck, and the eyes, are mostly the first parts to be attacked; the bones, joints, and lungs, are the next to become affected; the parotid glands, those of the axilla and of the groin, are not unfrequently attacked by it; and occasionally the thyroid, thymus, and prostate glands, have been found in a scrofulous state. The breasts of the female and the testicles of the male are sometimes found to be scrofulous; but it is not often we find the liver, kidneys, or pancreas affected by it; indeed those glands destined for the process of

secretion, although not altogether exempt, are fortunately but seldom attacked by scrofulous disease; however, there is no structure of the body but may become involved.

The matter of scrofulous inflammation differs from that which is the result of increased action in general; it is of a soft, flaky, and curdled consistence, and does not resemble the purulent secretion that usually results from chronic inflammation in other subjects; it afterwards changes to a watery and sometimes offensive sanies. The ulcerative process and that of cicatrization are very tedious.

The blood of scrofulous persons will generally be found to coagulate slowly and imperfectly, while the quantity of serum is always considerable: the debilitating nature of the disease clearly accounts for the imperfect manner in which these processes are performed. Dr. Cullen met with a case where the glands became affected in an infant three months old. I once saw a scrofulous state of the glands of the neck in a child under a year old; but I believe such instances to be extremely uncommon. The process of dentition is generally more tedious in scrofulous children, although it often commences earlier; their teeth are not unfrequently

very white, but soon decay, loosen, and are shed prematurely.

This disease is said to be common among swine, but I question if it be as much so as has been supposed. I have frequently seen it attack the joints of birds, particularly those which are natives of a warm climate. Horses, monkeys, rabbits, and other animals are sometimes affected by it. Healthy subjects have been frequently inoculated with scrofulous matter, but it has always failed in communicating the disease, proving beyond all doubt, that it is not of a contagious character. Some recent and interesting experiments have been instituted at the Veterinary College, by which it has been ascertained, that by transfusion of blood from a scrofulous horse the disease may be communicated to one unaffected.

Treatment.

This disease will frequently baffle the skill of the most scientific and experienced. In young subjects, where the scrofulous diathesis exists, we may, I am persuaded, often do much towards preventing its establishing itself, by strictly avoiding the excitants already alluded to. I consider a well-regulated

exercise in a pure and open air, so as not to produce fatigue, with attention to cleanliness, of the utmost consequence; while the effects of a changeable and damp atmosphere may be guarded against by the use of warm and suitable clothing. The patient, if living in a cold, damp situation, should be removed into one of a more congenial temperature; and as there will always be found to exist, functional derangement of the digestive organs, the restoration and continuance of their healthy action must form a main object of our attention. The diet should be both light and nutritious; a liberal allowance of animal food should be directed, taking care, however wholesome and proper it may be, not to overload the stomach; and be it remembered, that the functional action of this organ is more frequently weakened by surcharging it with food, than by erring on the other side.

In those cases in which the process of digestion is imperfectly performed, I have found it a good plan to allow a little wine; madeira or sherry should be preferred, as port wine will very generally tend to produce constipation. It should be given half an hour before dinner, with a biscuit, or a crust of bread; it will generally be found, not only

to cause a relish or desire for food, an object at all times important, but will likewise tend most materially to increase the gastric secretion. The use of vegetables should be rigorously prohibited ; indeed, not only in this disease, but under any circumstances, I strongly deprecate a vegetable diet for children.

Sea bathing may be sometimes used with decided advantage. I say sometimes, because I am inclined to think that more credit has been given to it than it deserves. It should never be recommended where a diseased or tuberculated state of the lungs is suspected. In some instances, I am persuaded it has proved rather detrimental than otherwise, particularly when the air is cold and damp. This disease is by no means unfrequent along the coast. But it must not be understood that I mean so far to undervalue the use of sea bathing, as to doubt its efficacy in assisting to give vigour to the constitution in certain cases, the result of which occasionally will be, the slow but gradual disappearance of the enlargement of indolent glands or joints. Where sea bathing is impracticable, I have been in the habit of recommending a bath impregnated with rock or sea salt, which I have sometimes found of material service, when

persevered in, in conjunction with the strict observance of the rules laid down to promote the general health. Without attention to them, both sea bathing and all other remedies will prove futile. Many give the preference to the warm bath; but upon the whole, I should recommend cold bathing, particularly for young subjects, as I have frequently found the former add considerably to the debility, especially when used during the summer months. In my opinion, the only cases in which a warm bath is applicable are children of a gross and full habit, and then only in the early stage of the disease, before suppuration has taken place.

It would be a loss of time to speak of the number of specifics for scrofula which have been brought before the public, either as prophylactics, or for the purpose of curing it when it has appeared. I am convinced that those remedies only are of use, which tend to promote the general tone and healthy action of the system. The state of the bowels must be attended to; and as constipation is a very general attendant, it will be necessary to give a little powder, composed of calomel and rhubarb, or jalap, every eight or ten days, or more frequently if deemed requisite. As a tonic, I consider the sulphate of quinine a va-

luable medicine ; for although bitter, when mixed in a little infusion of roses, and sweetened with syrup, I have seldom found children refuse to take it, however young they may have been. It may be given two or three times a day, according to circumstances ; while alterative doses of calomel are directed at bed time. Many recommend steel medicines, the effects of which are certainly sometimes very beneficial ; and of this class, I consider the sulphate or the carbonate of iron as the most preferable. I have found the *mistura ferri composita* of the pharmacopeia a useful form. The compound decoction of *sarsaparilla* and *dulcamara* may be sometimes advantageously used, adding a little of the dried subcarbonate of soda, where acidity prevails. Sulphureous and chalybeate waters have been recommended, and are sometimes of use. I have occasionally found a powder composed of ammoniacal iron and powdered columba useful. In those cases in which I have considered the lungs in any way involved, I have sometimes found a mixture of the extract of hemlock, with the decoction of guaiacum and sassafras, beneficial.

The muriate of lime has been recommended, but

I cannot speak of it favourably, as I have always found it produce a disordered state of the stomach ; nor can I say more in favour of the muriate of barytes, which has been recommended by Pinel, Hufeland, and others. Iodine has been highly extolled for the cure of scrofulous glands, and certainly deserves a trial : at the same time that it is taken internally, it should be applied to the part in form of ointment. In bronchocele, it has been employed with the most decided success ; therefore, reasoning from analogy, is it not reasonable to infer that it may be employed with advantage in scrofulous cases ?

Among mercurial alteratives, the use of which should not be omitted, I consider the following the most useful. The submuriate and sulphuret of mercury, the hydrargyrus cum creta, and the hydrargyrus cum sulphure. I have invariably observed, that in this disease, the remedies employed, however efficacious they may be in the first instance, lose their effects on the constitution sooner than in most other affections ; consequently it will be found necessary to vary them from time to time. I must not forget to allude to gentle friction, which

should be employed over the surface of the body night and morning, as it will tend to accelerate and equalize the circulation.

THE ABSORBENT GLANDS OF THE NECK

Are most generally the first parts attacked by this disease, I shall therefore proceed to notice their progress and treatment. When the enlargement first takes place, we find upon examination that the gland is no way painful unless pressed upon, and even then this is not always the case: the skin covering it still retains its natural colour. It is remarkably tardy in its progress towards suppuration. Many months, and in some instances years, may elapse before this takes place. The occurrence of severe cold, or any cause that gives rise to febrile and constitutional irritation, will frequently be found to cause the tumour to suppurate, previous to which the skin assumes a slightly inflamed appearance, which gradually changes to a crimson or purplish colour. It may remain in this state for a considerable time, when it assumes a livid hue and bursts, often leaving an extensive opening, and discharging a quantity of unhealthy

semi-purulent, thin, and curd-like matter, which is sometimes very fetid.

Upon the first appearance of the glandular enlargement, if there be much pain, I do not hesitate to apply a few leeches, not immediately on the swelling, but round the edge or circumference. In such a case, local bleeding should not be neglected, unless it be contra-indicated by a decidedly cachectic state of the constitution; however, its employment must be had recourse to with judgment and moderation. I then direct a lotion of Goulard water with spirits of wine, or the liquor ammoniæ acetatis in camphor mixture; while a healthy state of the stomach and bowels should be promoted by the exhibition of mild purgatives. I should still allow a nutritious diet, though not a stimulating one.

In those cases of glandular enlargement, in which there is no pain upon pressure, small and repeated blisters, or a plaster of tartar emetic, or emp. ammon. cum hydrarg., may sometimes be applied with advantage. I do not mean to assert that my endeavours have always been attended with success, but have no hesitation in recommending this plan, as I have in many instances after its adoption had the sa-

tisfaction of witnessing the disappearance of considerable strumous tumours. Electricity and galvanism are said to have occasionally proved useful ; but as my employment of them has been limited, I can give no decided opinion as to their respective effects.

If, after all our endeavours, fluctuation is perceived, and suppuration appears inevitable from the appearance of the skin, &c., the best practice is to open the tumour without loss of time. This may be done with a lancet, taking care that the opening be small. I consider it always advisable to evacuate the whole of the contents at once, as I am persuaded much mischief is often produced by not attending to this precaution. A warm poultice of bread and milk should afterwards be applied, which will generally be found to soothe the irritation of the part. Should this not be sufficient, a hemlock poultice may be substituted with advantage, after which the usual simple applications seem the most proper. However, when the wound assumes a sluggish or indolent character, it becomes necessary to employ stimuli, such as the sulphate of copper, or the kali purum, as recommended by Mr. Lloyd*, or a dres-

* See his *Treatise on Scrofula*, p. 82.

sing of the unguent. hydrarg. nit. may be sufficient, which in many cases I have found a very useful application. In scrofulous sores of a sluggish description, Sir Astley Cooper recommends the employment of an injection of the sulphate of zinc, in the proportion of twenty grains to a pint of water. This application gives rise to the formation of healthy granulations, and lessens the discharge.

DISEASED MESENTERIC GLANDS.

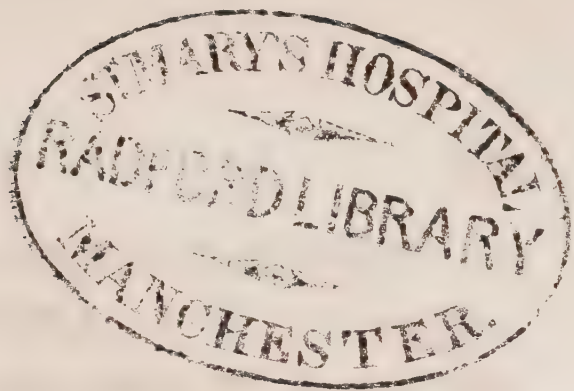
When we find the usual diagnostics of scrofula, as already described, accompanied by a tumid or swollen state of the abdomen, and when pressure produces uneasiness, when the appetite varies from one extreme to the other, when the bowels are in a state of constipation, and the motions offensive and of a clay colour, when the muscles, particularly those of the extremities, become attenuated and are flabby or flaccid to the touch,—we may fairly presume that a diseased or disordered state of the glands of the mesentery exists.

With regard to the treatment, I may refer the reader to a preceding part of this subject, in which I have entered at large into the general treatment

of scrofula; but it may not be amiss for me again to point out the necessity there is for directing a nutritious diet, of which animal food should form the principal part, and the propriety of pursuing those means best calculated to rouse the absorbents and produce a regular action on the bowels; for which purpose a little wine may be allowed, and the occasional use of mercurial purgatives, which I consider particularly applicable. I have only to add, that in this case I have found friction of great utility; it should be applied for about a quarter of an hour night and morning. It not only produces an increased peristaltic motion of the intestinal canal, but gently stimulates the absorbents.

It is a fact well known in the history of scrofula, that during the dark ages, superstition had attributed to kings the power of curing this formidable disease. This power was supposed to have been first delegated to Edward the Confessor, and to his successors, through the intervention of the monks. The French kings afterwards assumed this privilege, and practised it till the middle of the last cen-

ture. It was not abolished in England till the reign of Queen Anne, a period at which the sun of English literature shone in full splendour; which shows how long superstition will maintain its ground, even when the ignorance and prejudice which gave rise to it are consigned to oblivion.



RACHITIS, OR RICKETS.

THIS disease is seldom met with in warm climates, and is said to have first appeared in England about the middle of the seventeenth century. Children mostly become the subjects of it from the age of eight or ten months to two years; but instances have been recorded of the fœtus in utero being affected by it. The disease under consideration is in itself not always to be considered of a dangerous character; however, if not attended to in the outset, it may become so. In those cases where we fail in making a favourable impression on the disease before the fourth or fifth year, our endeavours will seldom prove successful in preventing deformity. The subjects of it have a pale, bloated countenance, the muscles are in a soft, relaxed, and flabby state; the abdomen is enlarged from a diseased state of the mesenteric glands; there is general debility and

a disinclination to exertion ; the head is observed to enlarge, as well as the wrists and ankle joints ; incurvation of the spine takes place, in consequence of which the breast protrudes, while the ribs appear flattened on their sides. Dentition is generally tedious and difficult, and the teeth often become carious and fall out. As the head increases in size, the fontanelles and sutures enlarge and separate. The long bones of the extremities participate in the general disease and become curved ; the bones of the sacrum and the os pubis may be in such close apposition, as ultimately to give rise in the female to difficult and dangerous parturition. I have occasionally witnessed cases of rickets, in which great deformity existed, where the constitutional powers were apparently no way affected ; but in general the digestive functions are much impaired. In some instances the mind will be prematurely developed. I believe the disease in the majority of cases ought to be attributed to bad nursing, to the want of proper or healthy food, carelessness in exposing children to cold and wet, inattention to cleanliness, and a want of good air and sufficient exercise. We therefore more generally meet with the disease among the poorer classes. The absence of a due

quantity of the phosphate of lime, upon the presence of which the solidity of the bones would seem to depend, is supposed to be the proximate cause of rickets, produced by a general weakness or want of power in the circulatory system. I consider the subjects of rickets are frequently of a scrofulous diathesis, although it does not follow that those of a scrofulous habit must necessarily be rickety.

Treatment.

The best treatment in this disease must obviously be that which promotes the powers of the digestive apparatus, by which we procure a healthy chyle, and a consequent increase of blood. Considering the treatment given in the preceding disease to be equally applicable in rickets, it will be unnecessary to enlarge further on the subject. Innumerable remedies have however been recommended, among others the phosphate of lime, the employment of which has not been attended with success; and as I know of none that seem to possess any specific or peculiar power over the disease, I do not consider it necessary to allude to them. To remedy the deformities produced by this disease, mechanical means

have been devised and adopted. I purposely abstain from discussing their respective merits, as I consider it a subject more properly belonging to a work written expressly on surgery. Generally speaking, I strongly object to keeping children constantly in the horizontal position. When we consider that our chief indication of cure is to promote the tone of the digestive organs, and to strengthen the general health, how inconsistent must that plan be, which not only precludes all exercise, but limits the child to breathe the same confined atmosphere. On the other hand, it must not be inferred that I recommend more exercise than is sufficient to promote general healthy action. Even in those cases in which mechanical means are employed to remedy curvature of the spine (the chief object of which is to give support to that part, and by avoiding pressure on the sides or soft parts, to assist it in recovering its proper position) the adoption of such a plan is by no means incompatible with the allowing a moderate share of exercise. The following authors may be consulted with advantage on this subject. Glisson de Rachitide ; Memoires de la Societè de Medecine;

Boyer, *Traite des Maladies Chir.* t. iii. Stanley's Observations in *Med. Chir. Transactions*, vol. vii; J. Wilson on the Structure and Physiology of the Skeleton, &c. p. 159; Sir Astley Cooper's Lectures.

TONGUE TIED.

THIS is a very uncommon occurrence, and during my practice, I have met with but one instance of the kind. In this case the *frænum linguæ* was so short, as completely to prevent the tongue being raised, or extended beyond the gums. The child was wholly incapacitated from sucking, and if the state of the *frænum* had not been observed, she would have inevitably sunk from inanition.

To remedy this defect, the *frænum* should be divided; but in this operation, care must be taken not to wound or divide the sublingual vessels, as the hæmorrhage produced by a slight wound may prove fatal; an instance of which occurred to a surgeon some time since. After the operation, the child, upon being taken home, a distance of about two miles, was found to be dead, and upon examination the stomach was filled with blood, which he had continued to suck from the wound, till death

was the consequence. In dividing the frænum, the child should be placed in the recumbent position, the tongue should be supported by the fore finger and thumb of the left hand, one being placed upon each side of the part, which should then be divided by a pair of blunt-pointed scissors, or a curved bistoury.

Monsieur Petit has suggested an ingenious contrivance for stopping hæmorrhage, should it occur from the division of the sublingual veins: it is merely a piece of ivory with prongs like a fork, so placed as to cover and press against the openings in the veins: the part from which the prongs arise should be rather broad, and a little convex, so as to correspond with the shape of the lower jaw, and be supported by it. Should this not succeed in stopping its progress, the actual cautery should be applied.

EXCORIATIONS OF THE EARS.

CHILDREN are often troubled with excoriations or ulcerations of the ears, the propriety of healing which has been questioned by some, supposing their occurrence to be directed by nature, as a preventive of complaints of a more formidable description, such as hydrocephalus, convulsions, &c.; but I am persuaded such observations are not always the result of experience. Sore ears are of frequent occurrence during dentition, but are not uncommon before that period.

In the first instance it may be prevented, if common care and attention be paid, by simply washing the part with milk and water, and afterwards applying a little burnt rag, which will prevent the pain and irritation produced by the cap coming in contact with the sore. Should the case not yield to

this, an application composed of the oxyde of zinc, and a little spermaceti ointment spread on fine lint, and renewed night and morning, will generally be found efficacious. By neglect and mismanagement, this may become a very troublesome and tedious case; and indeed it is astonishing to see what mischief often results from a want of attention to cleanliness, in what are called trifling complaints among children. I have often known the discharge go on so far as to produce extreme debility. In such cases, the strength of the child should be supported by light tonics and a generous diet. Under such circumstances, it is not an uncommon thing to see the lymphatic glands of the neck swollen, and sometimes painful.

This complaint, from long standing, is occasionally difficult to cure. It then calls for constitutional measures, such as a frequent brisk purge of calomel, a strict attention to regimen, and should the child be at the breast, it should be restricted to that alone. As an alterative, two or three grains of the hydrar. cum creta may be given at bed time for a few nights, which will be found to assist in promoting healthy action. Should the itching and

irritation be great, a lotion may be used, composed of equal parts of decoction of poppies and Goulard water ; and I have sometimes found a poultice made with this lotion and crumb of bread, allay the heat and irritation ; after which the zinc ointment, as mentioned above, may be employed with advantage.



SUPPURATION OR ABSCESS

OF

THE EAR.

MATTER of a purulent nature is not unfrequently found to escape from the ears of children, the source of which is mostly from an ulcer or ulcers situated in the membrane lining the meatus. The disease is often the result of uncleanness or cold, but sometimes it would appear to be constitutional. I have often known children of a scrofulous habit troubled with it, and in such cases I have seen the sudden and too hasty stoppage of the discharge excite head symptoms.

Treatment.

A careful regulation of the stomach and intestinal canal, and a strict attention to cleanliness, will generally suffice for the cure of this complaint. Should it

appear obstinate, and not yield to this plan, an injection should be thrown into the ear four or five times a day, composed of equal parts of milk and decoction of oak bark, made agreeably warm. However, cases will sometimes occur that prove very troublesome; but they will be mostly found to yield to a weak injection of sulphate of zinc, assisted by the application of a blister, which may be placed behind the ear. A bit of soft wool should be kept in the ear.

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